Practical Lessons and Workbook for Managing Decentralized Health Systems

CASE STUDY OF GRACELAND

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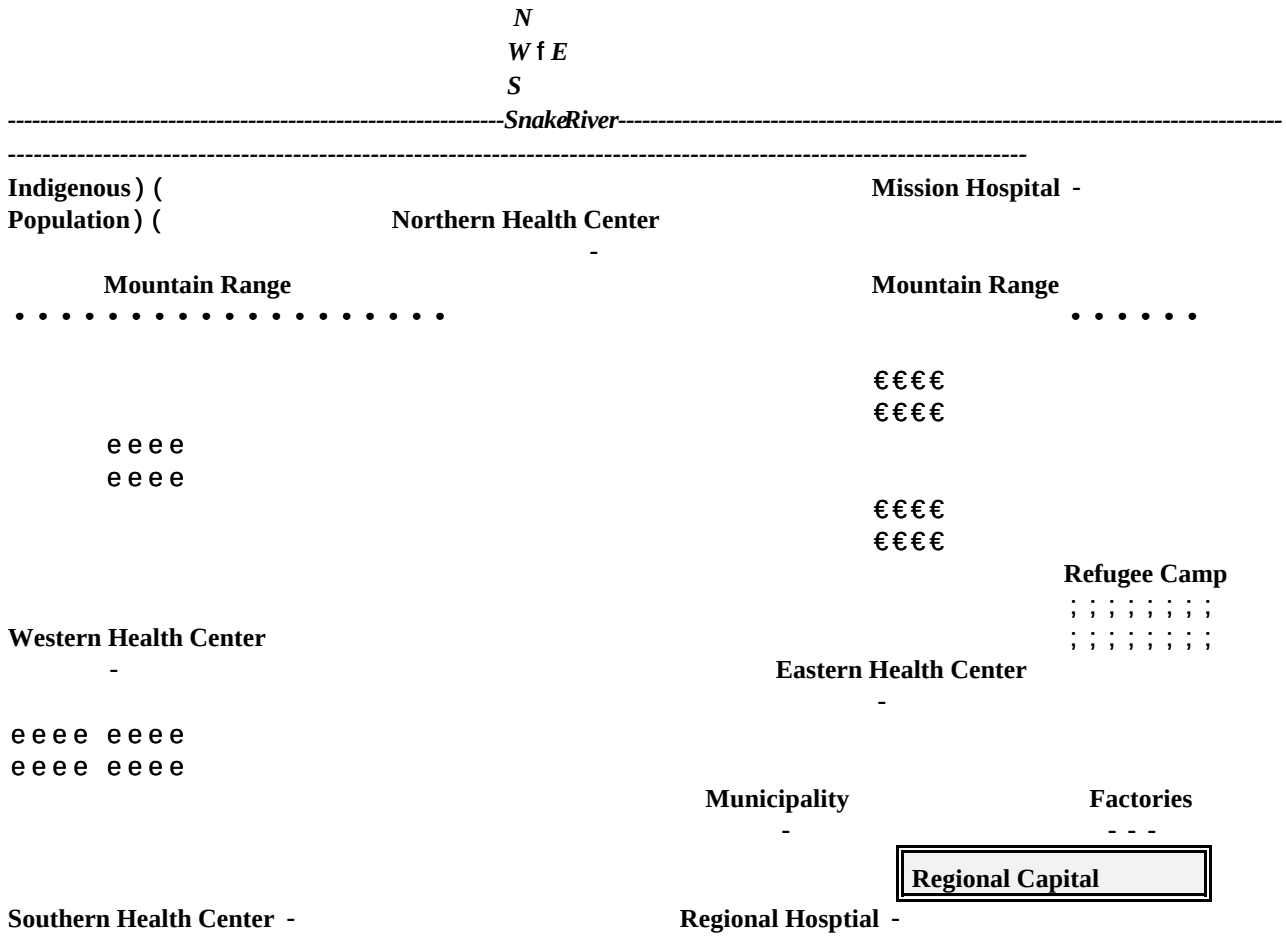
PART I:

Data for Decision-Making at the District Level

A Journey to *Doubledrift*



ÈWelcome to Graceland: The Case CountryÈ

Graceland

Graceland is a small, coastal country located in the southern hemisphere. It is bordered on the west by San Simeon, and on the east and the north by the Union of Diacratic States. To the southeast is Lobster Bay, and to the southwest is the Blue Coast. The coastline measures 400 km., most of it made up of tropical beaches.

The national territory, made up of valleys and mountains, boasts two mountain ranges in the northern region: the Powder Hill mountain range and the Eagle's Beak mountain range. It is in the Eagle's Beak range that you find the highest peak in the country - Mt. Evergreen, at 3,900 meters above sea level.

Among the rivers of Graceland, the most important is the Snake River, which is the source for much hydroelectric power. The most notable lakes are Crystal Lake and Lake George, both of which boast spectacular scenery.

The capital city is Bishopstown. The principal cities, besides the capital, are Springwell and Little Oaks.

Along the coastline, the port cities of Heavensgate and Misty Harbor are stopping points for many international ocean shipping companies.

The People

Graceland possesses fantastic natural scenery, but its greatest asset is its people; they are known the world over for their friendliness. Also, the Gracelandic worker has a reputation for high productivity and the capacity to learn quickly.

It should be mentioned that the country has several universities, both public and private, and other educational institutions which produce technical and professional workers of a high caliber. We can not leave out that some of these professionals add to their education by earning Master's degrees regionally.

Population

Graceland has 9 million inhabitants, with a population density of 238 people per square kilometer. The ethnic composition is 20% indigenous Gracelanders, 15% ethnic Cha-Chas, 5% of European descent, and the remaining 60% of mixed ethnic descent. About 10% (just under 1 million) of the population resides in the capital city of Bishopstown.

Government

Graceland is a democratic and representative republic, with three branches of government: the executive, headed by the President of the Republic, and the cabinet ministers; the legislative, made up of 90 deputies; and the judicial, headed by the Supreme Judicial Court which has 12 justices, among them the President. The courts are divided into constitutional courts, penal courts, civil courts, and administrative courts.

The government is currently in the process of implementing institutional reforms in every sector. Although this process of reform is already several years old, the process has been headed by a select group, and the public is not yet completely clear as to what to expect from the reforms; as a result, the people do not know of nor understand the impact these reforms will have on jobs, taxes, health services, or the educational system.

Political Organization

The territory of Graceland is divided into 5 provinces: Western, Northern, Southern, Eastern, and Central. These provinces are broken down into 15 regions.

Climate

In Graceland, rainfall is plentiful from November to April. The dry season lasts from May to October. The temperature varies between 28 and 35 degrees centigrade. At night the temperature drops and becomes more agreeable.

Language

The official language is English. However, in some zones of the interior, the descendants of the indigenous Gracelanders still speak their indigenous language, which is called Gracelandic. Cha-Cha is also spoken by many people, as a second language.

Religion

When the first wave of colonists arrived from Europe to colonize the territory, they brought with them, as part of their culture, Christianity, which is currently practiced by a majority of Gracelanders.

Health

A variety of organizations offer health services, principally the government, represented by the Ministry of Public Health and Social Welfare (MPHSW), and the Social Security Institute. Health services are also provided by the private sector, including pharmacies, non-governmental organizations and doctors in private practice. There are also private clinics which provide hospital services.

The MPHSW has a network of service facilities with a total of 400 primary, secondary and tertiary sites.

It is estimated that the MPHSW covers 50% of the population with basic health services, and 75% with hospital services. The Social Security Institute, which provides services only to those people who are covered by its insurance system, covers 12% of the population.

In the private sector, there are approximately 100 NGOs dedicated to health-related activities. The majority offer preventive services and basic curative services to the low-income rural population.

Around 1,500 doctors practice medicine in the country; of those, 65% (975) practice in Bishopstown, which means that other cities and the rural areas have very few doctors (525).

Many people receive their health services directly from the pharmacy, which results in a high rate of self-medication. In Graceland there are 1,050 pharmacies which cover the entire country.

Health Reform

At this moment the country is undergoing political reforms related to institutional modernization of the state. It is hoped that these reforms will affect every sector of the country.

The reforms being proposed for the MPHSW have to do with: institutional restructuring; human resources training; the equitable provision of services; the information system; and the monitoring and guarantee of quality. The final goal of the health system reform is to keep the MPHSW as the governing body of the NGOs and other institutions.

The government's efforts in the area of health care reform have been significant in the last five years. However, the administrative structures of the government's health system, which have remained the same over the years, have presented obstacles to any attempts to solve problems such as: the limited access of poor and rural populations to health services; low efficiency; the concentration of services in the area of Bishopstown; the focus on curative, rather than preventive care; a focus on services that do not match the epidemiological profile of the population; the inequitable distribution of human, financial and material resources; and the underutilization of the infrastructure. The reform efforts that have been made have been centralized, inefficient, and unfocussed in their activities and target populations.

Doubledrift

Located in the country's Western Province, Doubledrift is one of the 15 regions found in Graceland; it is also the smallest of the 15 regions, with a population of 100,000. It is 65 kilometers long and 30 kms. wide, covering a total of nearly 2,000 sq. kms. Doubledrift is divided by the Powder Hill mountain range, and borders the Snake River to its north.

The region of Doubledrift is divided into 5 districts. The regional capital is located in the Southern district, where the inhabitants enjoy a temperate climate with minimal rain. The bulk of the income is generated from cattle ranching. The regional hospital is also found in the capital, along with other government offices, micro-businesses, small factories, etc. The Western and Eastern districts border on the mountain range, which results in a favorable climate with a good amount of rain. The residents of these districts depend on agriculture - coffee and fruit plantations, as well as seasonal crops such as corn and tobacco. A recent influx of refugees from the neighboring state of Icksback (a UDS state) has resulted in the growth of the population of the Eastern district. In the Northern district, the climate is drier and hotter. In this district, the population subsists on agriculture and fishing in the Snake River. In effect, the Northern district is divided into two separate sections: that which is inhabited by indigenous Gracelanders; and that which has become home to generations of European missionaries, who boast one of the finest hospitals in the country.

Climate

Doubledrift experiences two seasons: the rainy season, which last from May through October, and the dry season, which runs from November through April.

Demographic Indicators

It is estimated that Doubledrift has a population density of roughly 50 persons per square km. For planning purposes, it can be assumed that 4% of the population is under one year of age; 20% is under five years of age; and 40% is between 15 - 45 years of age, with males and females represented in equal proportion. Nonetheless, it is important to note that many men migrate to the regional capital to seek employment in the factories, and return to their residences when the factories close for the holidays. As a result, many of the families in Doubledrift are cared for by the mothers and the family elders. The median per capita annual income is approximately $350.

The family sizes in the region range from 4.5 - 6.0 members. The birth rate is estimated at 44 per 1,000 women of reproductive age. The crude death rate is approximately 14 per 1,000 inhabitants, and the infant mortality rate is reported to be 95 per 1,000 live births. The principal causes of infant mortality are infectious diseases and malnutrition. Among the adult population, traumas and traffic accidents are the principal causes of death. It is worth mentioning that one of the country's most traveled paved roadways runs north to south through Doubledrift; the rest of the secondary and tertiary roads are dirt.

Education

Each of Doubledrift's districts boasts primary and secondary schools, although the schools in the Northern district are reputed to be of poorer quality. This may stem from the difficulty in trying to find a permanent director of the two primary schools.

Religion

The majority of the residents of Doubledrift practice some form of Christianity; a small enclave of Jehovah's Witnesses resides in the northwestern portion of the region. This group is known to resist immunizations. At the same time, the Evangelical mission, which also maintains a strong presence in the Northern district, has long rejected family planning.

Health Care Management

Each of the geographic Districts has a hospital, health clinic, or a health center. The Southern, Western, and Northern Districts have health centers with beds. The regional Hospital is located in the Capital, and provides ambulatory services.

One of the biggest problems for the regional health team is attracting suitable candidates to fill high level physician and nursing positions. This is particularly problematic in the Eastern district where there is a large refugee population.

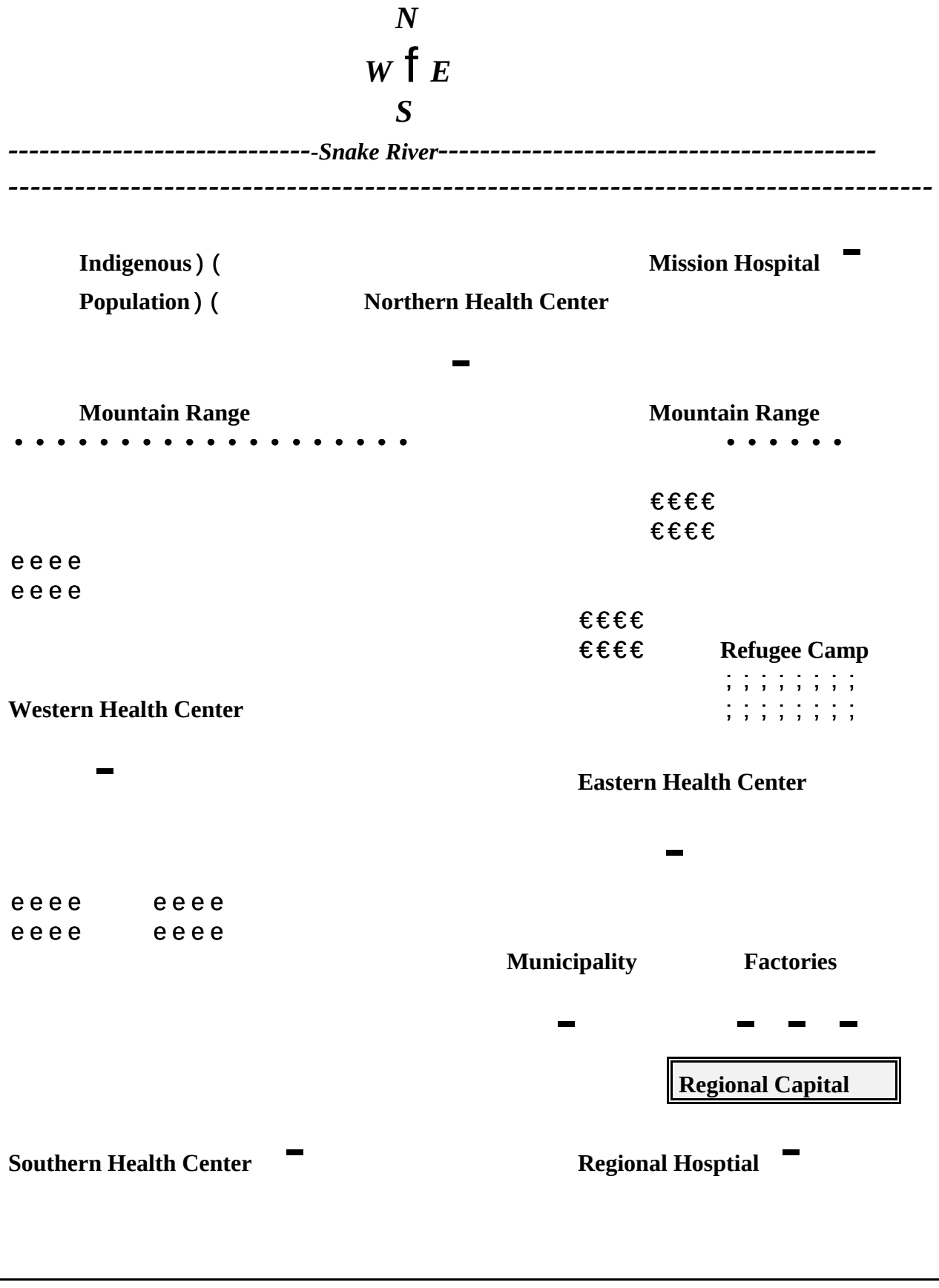
Another critical problem is the constant lack of funds to purchase medical supplies and equipment, and to maintain existing equipment and infrastructure. Furthermore, when supplies and materials are requested from the area warehouse, there is no guarantee when the goods will actually be delivered, nor the amount that will be delivered. As a result, the service delivery sites are often understocked, and frequently experience stockouts.

As Graceland and Doubledrift prepare for the political reforms, the decentralization of health services management is a top priority for the government.

Although the national constitution guarantees that health services be provided free of charge, the reform measures currently under consideration suggest that, in the near future, the regions will have to become more self-sufficient and generate their own revenues. In addition, the government has announced its plan to maintain its health budget at the current level of 5% of the total national budget, taking into account inflation which is running around 12% a year.

Your task is to help the regional health team of Doubledrift to draft, implement, and evaluate a plan that will allow them to manage locally the delivery of high quality health services. You can assume full authority for the development of this plan.

Map of *Doubledrift*



Key Terminology: Measures and Indicators

Key Measures: Rates, Ratios and Proportions

Rates: A rate measures the probability of occurrence of some particular event. The formula for calculating a rate is: *x/y* x *k*

Where...

x = *the number of times an event has occurred during the specific time interval*
y = *the number of persons exposed to the risk of the event during the same time interval*
k = *some round number serving as a constant (100;1,000; 10,000; 100,000). The size of the constant depends on the relative magnitude of x and y.*

Example: Contraceptive Prevalence Rate

x = *the number of women of reproductive age using a modern method of contraception in your community (3,125)*
y = *the total number of women of reproductive age in your community (12,500)*
k = *100 women of reproductive age*

3,125/12,500 x *100 = a CPR of* 25%

Ratios: A ratio is the expression of the relationship between a numerator and a denominator, which may or may not involve a time interval. The formula for calculating a rate is: *x : y or x/y x k*

Where...

x = *the number of events or items counted and not necessarily a portion of y*
y = *the number of events or items counted and not necessarily a population of persons exposed to the risk*
k = *a base, as in the case of a rate, but usually 1 or 100 for purposes of expressing ratios*

Example: Female Secondary Education Ratio

x = *the number of women enrolled at the secondary level in your community (500)*
y = *the number of women in the relevant age group (2,000 women between 12-18)*
k = *100*

500/2,000 x *100 = for every 100 women of secondary school age, only 25 of the women in your community are actually enrolled*

Proportions: A proportion is an expression in which the numerator is always included in the denominator, and the sum is always equal to 100. Therefore, a proportion is expressed as a percent. The formula for calculating a percent is: *x/y* x *100*

Example: Approval of Family Planning

x = *number of women surveyed in your community who state that they approve of family planning (5,000)*

y = *total number of women in your community asked the question (7,000)*

k = *100*

5,000/7,000 x *100 = 71.4% of women surveyed in your community stated that they approve of family planning*

Incidence and Prevalence:

Incidence	Prevalence
Measures the number of new cases, episodes or events, occurring over a defined period of time, commonly one year. Incidence is the most basic measure of frequency and is the best indicator of whether a condition is decreasing, increasing, or remaining static. It is, therefore, the best measure to use in evaluating the effectiveness of health programs. It is also the measure used in surveillance systems and for analyzing how people are using the health services. Examples include births and deaths, occurring in a one year period, cases of neonatal tetanus diagnosed per year, number of women attending a pre-natal clinic for the first time per month, and the number of cases of vaginal bleeding reported during a one year period.	Measures the total number of existing cases, episodes or events, occurring at one point in time, commonly on a particular day. Prevalence may be more complicated to interpret than incidence, because it depends upon the number of people who have developed their illness or condition in the past, and have continued to manifest the illness or condition to the present time. Prevalence is a combination of previous incidence of an illness or condition and its duration. Examples of frequency measured by prevalence are the total number of pregnant women who are anemic on a register at the beginning of each month, or the number of hospital beds occupied per day.

Whereas incidence is very useful for measuring those diseases and conditions with a short average duration, like, measles, diarrhea, and vaginal bleeding; prevalence is useful for measuring more chronic conditions, like heart disease, malnutrition, and anemia.

Task:

I. Case Study Narrative

1. Complete the worksheets on the case narrative

II. Table 2: Human Resource Distribution Data

1. Describe the health personnel distribution pattern. Which staff are deficient and which are excessive and where?

2. What might explain the variations across the Region and among the different Districts?

III. Table 3: Key Health Indicators

1. Calculate the following:

    a. Bed-occupancy rate

    b. Outpatient visits per inhabitant.

    c. Institutional birth rate.

    d. BCG coverage rate.

    e. Measles immunization coverage rate.

    f. BCG-Measles immunization drop-out rate.

    g. Family planning coverage rate (assume that oral contraceptives are the only available modern method of contraception).

    h. Percent children attending 6 well-baby controls during their first year of life.

    i. Tetanus Toxoid immunization coverage rate (for Mothers).

2. Suggest possible reasons for the variations in the above service delivery and coverage rates and proportions. What implications do these variations have on the planning process?

IV. Table 4: Morbidity and Mortality Data

1. The illnesses and conditions represented in this table are used as indicators for purposes of this planning exercise.

    a. What other illness and conditions might be useful as indicators?

2. Calculate the following rates for each District:

    a. Diarrhea attack rate per child <5 years of age

    b. Measles attack rate per 1000 children <5 years of age (refer to table 3)

    c. Malaria attack rate per 1000 inhabitants

    d. Maternal mortality rate per 100,000 live births

    e. STD attack rate per 1000 inhabitants between 15-45 years of age

    f. Tuberculosis incidence rate per 100,000 inhabitants

    g. Trauma/accident rate per 100,000 inhabitants

V. A Review of Equity, Access and Coverage

1. Review tables 2, 3, 4 (Answer sheets) from the case study. Use the data from the tables, as well as the information from the narrative to identify the two primary problems related to: 1) Equity, 2) Acces, and 3) Coverage.

<u>EQUITY</u>

1. Which type of calculation best describes whether or not a situation is equitable?

2. Which ratios might you consider?

3. Is a ratio absolute or relative?

4. Which ratios place you at an advantage or disadvantage in the region?

<u>ACCESS</u>

1. If a parent and a child set out for a visit to the clinic what are all of the access issues they might encounter, from their time of departure from home, to the time of their departure

from the clinic to return home?

2. Which of these are related to physical, clinical, material, cultural and financial inaccessibility?

COVERAGE

1. Who is being reached by what services?

2. Who is not being reached by what services?

3. Where are the most important gaps?

Worksheets: **Case Study Narrative**

1. Geographic Characteristics and Climate:

Graceland	Doubledrift

2. Population:

Graceland	Doubledrift

3. Health Situation:

Graceland	Doubledrift

4. Health Services:

Graceland	Doubledrift

5. Administrative Structure:

Graceland	Doubledrift

6. Financial Situation:

Graceland	Doubledrift

7. Internal Limitations:

Graceland	Doubledrift

8. External Limitations:

Graceland	Doubledrift

Calculations for Tables 3 and 4

TABLE 3:

1. Bed-Occupancy Rate.

   NO. INPATIENT DAYS
   NUMBER OF BEDS (from table 2) X 100 / 365

2. Outpatient Visits per Inhabitant.

   NO. OUTPATIENT VISITS
   TARGET POPULATION
   (no constant since it is per inhabitant)

3. Institutional Birth Rate.

   NO. INSTITUTIONAL DELIVERIES
   POPULATION UNDER 1 YEAR X 100

4. BCG Coverage Rate.

   NO. BCG IMMUNIZATIONS
   POPULATION UNDER 1 YEAR X 100

5. Measles Immunization Coverage Rate.

   NO. MEASLES IMMUNIZATIONS
   POPULATION UNDER 1 YEAR X 100

6. BCG-Measles Immunization Drop-Out Rate.

   BCG IMMUNIZATIONS - MEASLES IMMUNIZATIONS
   BCG IMMUNIZATIONS X 100

7. Family Planning Coverage Rate (assume FP pills are the only modern method available).

   NO. FP CYCLES ISSUED / 13 MONTHS
   FEMALE POPULATION 15-45 YEARS OF AGE X 100
   (20% total pop. refer to table 1)

8. Percent Children Attending 6 Well-Baby Controls during First Year of Life.

   NO. WELL-BABY VISITS / 6 TIMES
   TARGET POPULATION UNDER 1 YEAR X 100

9. TT Immunization Coverage Rate (for Mothers).

   NO. TT DOSES GIVEN TO MOTHERS / 2 X 1000
   FEMALE POPULATION 15-45 YEARS OF AGE
   (20% total pop. refer to table 1)

TABLE 4:

1. Diarrhea Attack Rate per Child <5 Years of Age.

   NO. CASES CHILDHOOD DIARRHEA
   POPULATION UNDER 5
   (total pop. x .20)

2. Measles Attack Rate per 1000 Children <5 Years of Age.

   NO. CASES MEASLES
   POPULATION UNDER 5 X 1000
   (total pop. x .20)

3. Malaria Attack Rate per 1000 Inhabitants.

   NO. MALARIA CASES
   TOTAL POPULATION X 1000

4. Maternal Mortality Rate per 100,000 Live Births.

   NO. MATERNAL DEATHS (from table 4)
   POPULATION UNDER 1 X 100,000 LIVE BIRTHS

5. STD Attack Rate per 1000 Inhabitants between 15-45 Years of Age.

   NO. STD CASES
   TOTAL POPULATION X .40 (from table 1) X 1000

6. Tuberculosis Incidence Rate per 100,000 Inhabitants.

   NO. TB CASES
   TOTAL POPULATION X 100,000

7. Trauma/Accident Rate per 100,000 Inhabitants.

   NO. TRAUMA CASES
   TOTAL POPULATION X 100,000

TABLE 1: General Demographic Data

DISTRICTS	SOUTHERN	WESTERN	EASTERN	NORTHERN	CAPITAL	TOTALS
ESTIMATED POPULATION	20,000	20,000	30,000	20,000	10,000	100,000
AVERAGE FAMILY SIZE	6	6	5.5	4.8	4.5	
% UNDER 1 YEAR OF AGE						4
% UNDER 5 YEARS OF AGE						20
% 15-45 YEARS OF AGE (MEN:WOMEN EQUAL)						40
BIRTH RATE PER 1000 (APPROX)						44/1000
CRUDE DEATH RATE PER 1000 (APPROX)						14/1000
INFANT MORTALITY RATE PER 1000 (APPROX)						95/1000
UNDER 5 MORTALITY RATE (APPROX)						145/1000
EXPECTED BIRTHS PER YEAR	880	880	1320	880	440	4400
AVERAGE INCOME $ PER YEAR	$300	$400	$350	$200	$500	$350
CLIMATE	WARM	COOL	COOL	HOT	MODERATE	
RAINFALL	40 to 50 cms.	75 to 90 cms.	75 to 90 cms.	25 to 40 cms.	40 to 50 cms.	
SOURCE OF INCOME	PASTORAL	CROPS	CROPS	SUBSISTENCE	COMMERCE	
% LITERACY LEVEL	50	65	60	20	85	56
RELIGION						
% CHRISTIAN (evangelicals, baptists, methodists)	90	90	85	25	90	
% CATHOLIC	9	5	15	40	5	
% JEHOVAH'S WITNESS	1	5	0	35	5	

TABLE 2: Human Resource Distribution

DISTRICT	SOUTHERN	WESTERN	EASTERN	NORTHERN	NORTHERN	REGIONAL			TOTAL
FACILITY	HEALTH CTR	HEALTH CTR	HEALTH CLIN	HEALTH CTR	MISSION HOSP	HOSPITAL	TOTAL	SALARIES	EXPENSE
PHYSICIANS	0	1	0	1	2	4	8	$9,000	$72,000
PHARMACISTS						1	1	$6,000	$6,000
ADMINISTRATORS						1	1	$5,000	$5,000
SECRETARIES					1	3	4	$3,500	$14,000
LICENSED NURSES		1			1	4	6	$4,000	$24,000
PROFESSIONAL NURSES	2	2	1	2	3	10	20	$3,000	$60,000
AUXILIARY NURSES	1	1	1	1	2	15	21	$1,750	$36,750
LABORATORY STAFF	1				1	2	4	$2,750	$11,000
HEALTH PROMOTERS	1	1		1			3	$3,500	$10,500
DRIVERS					1	2	3	$2,500	$7,500
OTHER AUXILIARY STAFF					3	5	8	$1,250	$10,000
CONTRACTED LABOR	2	2	1	2	7	13	27	$750	$20,250
COMMUNITY HEALTH WORKERS	10	20	20	10	100		160		$0
TOTAL	17	28	23	17	121	60	266		$277,000
BEDS	2	4	0	2	15	100	123		

NOTES:

1. The Director of the Mission Hospital is a foreigner and a female.
2. The Regional Hospital Director position is open.
3. Licensed Nurses hold a B.S. degree.
4. Professional Nurses graduated from a hospital training program.

TABLE 3: Key Health Indicators Worksheet

DISTRICT	SOUTHERN	WESTERN	EASTERN	NORTHERN	NORTHERN	REGIONAL	TOTAL
TARGET POPULATION	**20,000**	**20,000**	**30,000**	**12,000**	**8,000**	**10,000**	**100,000**
TARGET POPULATION <1 (4%)	**800**	**800**	**1,200**	**480**	**320**	**400**	**4,000**
FACILITY	**HEALTH CTR**	**HEALTH CTR**	**HEALTH CLIN**	**HEALTH CTR**	**MISSION H**	**HOSPITAL**	
ANNUAL FIGURES							
INPATIENT DAYS	219	730	0	236	2,734	23,474	27,393
OUTPATIENT VISITS	4,164	16,000	15,643	7,484	8,956	30,812	83,059
INSTITUTIONAL DELIVERIES	168	529	144	74	224	546	1,685
BCG IMMUNIZATIONS	179	644	323	52	289	321	1,808
MEASLES IMMUNIZATIONS	132	643	287	47	224	223	1,556
FP CYCLES ISSUED	2,444	12,930	3,928	626	0	1,944	21,872
WELL-BABY VISITS < 1 YEAR OF AGE	1,432	4,732	0	2,439	4,358	1,389	14,350
DOSES TT GIVEN TO MOTHERS	12	81	72	32	54	94	345
RATES							
BED-OCCUPANCY RATE	30(2 beds)	50(4 beds)	0(0 beds)	32(2 beds)	50(15 beds)	64(100 beds)	61(123 beds)
OUTPATIENT VISITS PER INHABITANT							
INSTITUTIONAL BIRTH RATE							
BCG COVERAGE RATE							
MEASLES IMMUNIZATION COVERAGE RATE							
BCG-MEASLES IMMUNIZATION DROP-OUT RATE							
FAMILY PLANNING COVERAGE RATE (pill)							
PERCENT CHILDREN ATTENDING 6 WELL-BABY VISITS/1st YR							
TT IMMUNIZATION COVERAGE RATE (Mothers)							

NOTE:

There is a supplementary feeding program in the northern zone.

TABLE 3: Key Health Indicators Answer Sheet

DISTRICT	SOUTHERN	WESTERN	EASTERN	NORTHERN	NORTHERN	REGIONAL	TOTAL
TARGET POPULATION	**20,000**	**20,000**	**30,000**	**12,000**	**8,000**	**10,000**	**100,000**
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RATES							
BED-OCCUPANCY RATE	30(2 beds)	50(4 beds)	0(0 beds)	32(2 beds)	50(15 beds)	64(100 beds)	61(123 beds)
OUTPATIENT VISITS PER INHABITANT	0.21	0.80	0.52	0.62	1.12	3.08	0.83
INSTITUTIONAL BIRTH RATE	21%	66%	12%	15%	70%	137%	42%
BCG COVERAGE RATE	22%	81%	27%	11%	90%	80%	45%
MEASLES IMMUNIZATION COVERAGE RATE	17%	80%	24%	10%	70%	56%	39%
BCG-MEASLES IMMUNIZATION DROP-OUT RATE	26%	0%	11%	10%	22%	31%	14%
FAMILY PLANNING COVERAGE RATE (pill)	5%	25%	5%	2%	0	7.5%	8%
PERCENT CHILDREN ATTENDING 6 WELL-BABY VISITS/1st YR	30%	99%	0	85%	227%	58%	60%
TT IMMUNIZATION COVERAGE RATE (Mothers)	2%	10%	6%	7%	17%	24%	9%

NOTE:

There is a supplementary feeding program in the northern zone.

TABLE 4: 1997 Morbidity and Mortality Data Worksheet

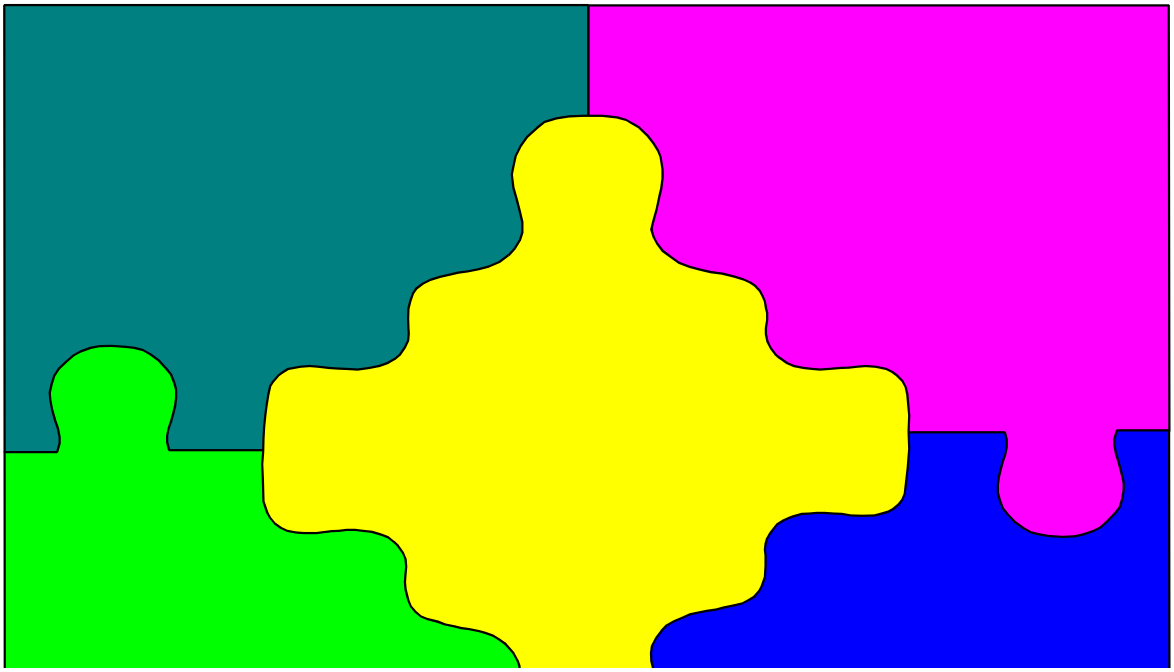
DISTRICT	SOUTHERN	WESTERN	EASTERN	NORTHERN	NORTH	REGIONAL	TOTAL
TARGET POPULATION	**20000**	**20000**	**30000**	**12000**	**8000**	**10000**	**100000**
TARGET POPULATION <5 (20%)	**4000**	**4000**	**6000**	**2400**	**1600**	**2000**	**20000**
FACILITY	**HEALTH CTR**	**HEALTH CTR**	**HEALTH CLIN**	**HEALTH CTR**	**MISSION H**	**HOSPITAL**	
CASES							
DIARRHEA < 5 YEARS OF AGE	6452	23000	12432	11329	14321	8321	75855
MEASLES	89	74	11	124	1	185	484
MALARIA	65	1267	640	6342	11247	340	19901
MATERNAL MORTALITY				1		4	5
STDS	4450	14682	3296	3248	24	12466	38166
TUBERCULOSIS					24	148	172
TRAUMA AND TRAFFIC ACCIDENTS	40	110	15	80	80	220	545
ATTACK RATES							
DIARRHEA ATTACK RATE PER CHILD < 5							
MEASLES ATTACK RATE PER 1000 < 5							
MALARIA ATTACK RATE PER 1000 INHABITANTS							
MATERNAL MORTALITY RATE PER 100,000 LIVE BIRTHS							
STD ATTACK RATE PER 1000 INHABITANTS 15-45 YEARS AGE							
TUBERCULOSIS INCIDENCE RATE PER 100,000 INHABITANTS							
TRAUMA/ACCIDENT RATE PER 100,000 INHABITANTS							

TABLE 4: 1997 Morbidity and Mortality Data Answer Sheet

DISTRICT	SOUTHERN	WESTERN	EASTERN	NORTHERN	NORTH	REGIONAL	TOTAL
TARGET POPULATION	**20000**	**20000**	**30000**	**12000**	**8000**	**10000**	**100000**
TARGET POPULATION <5 (20%)	**4000**	**4000**	**6000**	**2400**	**1600**	**2000**	**20000**
FACILITY	**HEALTH CTR**	**HEALTH CTR**	**HEALTH CLIN**	**HEALTH CTR**	**MISSION H**	**HOSPITAL**	
CASES							
DIARRHEA < 5 YEARS OF AGE	6452	23000	12432	11329	14321	8321	75855
MEASLES	89	74	11	124	1	185	484
MALARIA	65	1267	640	6342	11247	340	19901
MATERNAL MORTALITY				1		4	5
STDS	4450	14682	3296	3248	24	12466	38166
TUBERCULOSIS					24	148	172
TRAUMA AND TRAFFIC ACCIDENTS	40	110	15	80	80	220	545
ATTACK RATES							
DIARRHEA ATTACK RATE PER CHILD < 5	2	6	2	5	9	4	4
MEASLES ATTACK RATE PER 1000 < 5	22	19	2	52	1	93	24
MALARIA ATTACK RATE PER 1000 INHABITANTS	3	63	21	529	1406	34	199
MATERNAL MORTALITY RATE PER 100,000 LIVE BIRTHS	0	0	0	208	0	1000	125
STD ATTACK RATE PER 1000 INHABITANTS 15-45 YEARS AGE	556	1835	270	680	10	3120	950
TUBERCULOSIS INCIDENCE RATE PER 100,000 INHABITANTS	0	0	0	0	300	1480	172
TRAUMA/ACCIDENT RATE PER 100,000 INHABITANTS	200	550	50	667	1000	2200	545

PART II:

The Planning Process and Mortality Mapping



Group Exercise: Mortality Mapping

I. Background

The term child survival implies an outcome: that of a newborn surviving the first year of life. And like all desired outcomes, the ability of a child to survive the first year of life depends on a series of internal and external factors that combine favorably to produce positive outcomes.

The purpose of this exercise is to use the context of child survival *to evaluate the influence of the family and the health care system on health outcomes*. During this session, the participants study the lives and deaths of Gerusha and Joseph, two children who die before celebrating their first birthdays. The groups will be asked to use the findings from their analysis of *Doubledrift* to explain how both the health care system and the family contributed to the untimely deaths of these children, at each stage of their lives, starting with the first trimester of gestation. Additionally, is it hoped that this exercise will sensitize the participants to their role, as planners, to increase a newborn's chances for survival.

II. Tasks

1. Develop a working definition of ***Child Survival***.

2. Using the information and data describing *Doubledrift*, make a list of some of the major health concerns in the Region.

3. Using the worksheets provided, map the Lives of Gerusha and Joseph, indicating how their families and the health sector contributed to their untimely deaths, at each stage of their brief lives.

Group I: **Gerusha Dies at 3 Weeks of Age**

Health System	1st Year of Life	Family
	<- 7-12 months ->	
	<- 1-6 months ->	
	<- 0-1 month -> *Gerusha dies at 3 weeks of age*	

Birth

	Third Trimester <- ->	
	Second Trimester <- ->	
	First Trimester <- ->	

Group II: **Joseph Dies at 4 Months of Age**

Health System	1st Year of Life	Family
	<- **7-12 months** ->	
	<- **1-6 months** -> ***Joseph dies at 4 months of age***	
	<- **0-1 month** ->	

Birth

	Third Trimester <- ->	
	Second Trimester <- ->	
	First Trimester <- ->	

Group Exercise: Analyzing the Findings

The Gap Analysis

The Gap Analysis is a problem-solving tool that allows managers to identify and overcome certain obstacles that impede the improvement of specific unfavorable health indicators and characteristics.

Step I: Identify Certain Unfavorable Health Indicators and Characteristics

Review the findings of the Mortality Mapping exercise. Underline all of the health indicators and/or characteristics you identified as contributing to the premature death of the child. Examples might be: adolescent pregnancy, lack of access to health center, single mother, illiteracy, socio-economic status, lack of confidence in the health system, inadequate supply of drugs or supplies, etc.

Step II: Eliminate Unfavorable Health Indicators or Characteristics, which you can not Alter

Once listed, you will note that there are some indicators and/or characteristics that can not be improved upon at the district or regional level, such as family planning policies; or by the health sector, such as literacy. As a result, some of the indicators and characteristics from the list will be eliminated. Put an asterisk next to those health indicators and characteristics which ***can*** be addressed at the appropriate level of operation.

Step III: Completing the Worksheet

Note the remaining health indicators and characteristics in the **first column** of the worksheet. In the **second column**, proceeding one indicator and characteristic at a time, describe each in their present state, as suggested by your group's recount of the child's life story. Then in the **fifth column**, again proceeding one indicator and characteristic at a time, describe the desired status of each of these health indicators and characteristics. In the **third column**, make a list of all of the obstacles which presently prohibit you from achieving the desired indicator (rate, ratio, proportion) or characteristic. Be aware that it is impossible to eliminate all of the obstacles that impede the achievement of optimal health status; therefore, upon listing the obstacles, you should select for consideration only those which: 1) correspond to the priority indicators, and 2) can be addressed at the participant's level of operation with their current budget and personnel. As a final step, list in the **fourth column** those strategies you feel could eliminate or reduce the impact of the obstacles.

Gap Analysis Worksheet

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Health Indicators/ Characteristics	**Present Status**	**Desired Status**	**Obstacles**	**Strategies**

PART III:

Budgeting and Financial Administration

Using Historical Financial Data to Make Budgeting Decisions

A. Historical Financial Analysis of Health Expenditures in the Study Region

This new focus on decentralization marks the first time you have been given the authority to prepare your own regional budget. As such, you have been instructed to develop a budget for the region for the next year. The Regional Administrator developed a format for the budget, which includes five line items:

1. **Salaries/Personnel**
2. **Drugs and Medical Supplies**
3. **Vehicles and Transport**
4. **Utilities**
5. **Other**

The budget format organizes these line items by facility for each of the districts. As a first step in developing your budget, you decide to examine the records from last year to analyze how resources were used. Along the way, you will fill-out the budget worksheets. This historical analysis will help you decide how to best allocate resources in the future.

1. Salaries/Personnel

The budget for Salaries/Personnel is not yet managed by the Regional Management Team. Most staff are civil servants and receive their salaries directly from the Provincial Personnel Office. Community Health Workers are not civil servants, but are renumerated directly by the communities they serve.

a. Analysis

1. Using the Human Resource Distribution Data from Table 2, calculate the salary/personnel expenses for each facility. Enter the amounts on Worksheet 1-a.

2. Transfer the facility totals to Worksheet 1-Summary, under the line item "Salaries/Personnel." Enter the regional total in the last column of Worksheet 1-Summary, under the line item "Salaries/Personnel."

b. Discussion

1. Since the Regional Management Team does not manage the salary/personnel budget, the Regional Administrator questions whether salary/personnel should even appear as a line item on the historical financial analysis, or in next year's budget. Do you think the salary/personnel expenses should be included? Why or why not?

2. Are "salary" and "personnel" the same thing? Should the line item be changed to reflect better the nature of this cost item?

2. Drugs and Medical Supplies

The Region received a total of $68,730 from the Province last year for drug and medical supplies. You distributed this money in the following way:

- **65% for the Regional Hospital**
- **15% for the Mission Hospital**
- **Remaining 20% divided equally among District facilities**

The Mission Hospital received donations of $10,000 worth of laboratory reagents and x-ray film. Since this supply was received mid-year, only about 50% of these items has been used so far this year.

a. Analysis

1. Calculate the expenses for drugs and medical supplies for all facilities. Enter the amounts on Worksheet 1-Summary, under the line item "Drugs and Medical Supplies."

2. Calculate the regional total, and enter it in the last column on Worksheet 1-Summary, under the line item "Drugs and Medical Supplies."

b. Discussion

The Regional Pharmacist raises questions about the fairness of your drug allocation policy. The Pharmacist believes that the drug and medical supplies budget is not divided fairly; yet, the district facilities all received an equal share of the 20% drug and medical supplies budget allocated to non-hospital facilities.

What information and/or data might you use to evaluate the policy of drug and medical supply budget allocation to determine its fairness?

3. Vehicles and Transport

The Mission Hospital spent a total of $500 in fuel and $1,500 in repairs and maintenance for their own vehicles last year.

Three other vehicles are kept at the Regional Hospital, but are used throughout the Region to transport patients, pick-up and deliver drugs and other supplies, and to conduct supervision and training. A total of $9,000 in fuel vouchers was allocated to the Region last year. These arrived late, so only $7,000 were used before the end of the year. The Regional Hospital spent $10,850 on vehicle repair and maintenance last year.

a. Analysis

1. Calculate the vehicles and transport expenses for last year, by facility. Enter the amounts on Worksheet 1-Summary, under the line item “Vehicles and Transport.”

2. Calculate the regional total, and enter it in the last column on Worksheet 1-Summary, under the line item “Vehicles and Transport.”

b. Discussion

Since the three government vehicles were used throughout the Region last year, for activities to benefit all of the District facilities, as well as the Regional Hospital, does it seem appropriate to record the entire expense under the Regional Hospital? If not, what might be a more equitable way of recording this expense?

4. Utilities

The Regional Administrator has prepared a report of quarterly bills received for telephone, water, and electricity, by facility. This report can be found on the following page. He has also noted expenditures on firewood, gas, and kerosene, which he calculated using the petty cash records for each facility.

Since the utility bills for the Mission Hospital are paid directly by the Mission, the Regional Administrator did not have access to these records. However, in speaking with the Mission Hospital Administrator, the Regional Administrator learned that the total expenditure last year for all utilities combined was $1,650.

a. Analysis

1. Calculate the total utility expenses for last year, by facility. Enter the amounts on Worksheet 1-Summary, under the line item "Utilities."

2. Add up the totals for each facility to determine the utility expenses for the Region as a whole. Enter this total in the last column on Worksheet 1-Summary, under the line item "Utilities."

b. Discussion

1. Which facilities have the highest expenditures on utilities? Which have the lowest? How might these differences be explained?

2. Do you see anything unusual in expenditure patterns over time?

UTILITY BILLS LEDGER, BY QUARTER (in dollars)

First Quarter

Facility	Telephone	Water	Electricity	Wood/Gas	Total
Reg. Hosp.	550	250	300	50	1,150
HC North	50	35	40	10	135
HC South	54	40	38	12	144
HC West	55	42	34	5	136
Clinic East	0	40	35	15	90
Total	709	407	447	92	1,655

Second Quarter

Facility	Telephone	Water	Electricity	Wood/Gas	Total
Reg. Hosp.	580	300	250	0	1,130
HC North	45	30	25	0	100
HC South	50	29	32	0	111
HC West	170	40	30	10	250
Clinic East	0	38	25	15	78
Total	845	437	362	25	1,669

Third Quarter

Facility	Telephone	Water	Electricity	Wood/Gas	Total
Reg. Hosp.	590	320	280	50	1,240
HC North	0	40	34	7	81
HC South	42	38	38	8	126
HC West	465	40	35	10	550
Clinic East	0	30	35	0	65
Total	1,097	468	422	75	2,062

Fourth Quarter

Facility	Telephone	Water	Electricity	Wood/Gas	Total
Reg. Hosp.	650	300	350	30	1,330
HC North	0	28	30	6	64
HC South	51	28	40	0	119
HC West	679	35	40	10	764
Clinic East	0	34	25	8	67
Total	1,380	425	485	54	2,344

5. Other

Other expenditures, including office supplies, printing, cleaning supplies, building maintenance, and hired services (masonry, carpentry, electrician) are often financed through petty cash accounts. District facilities record these expenses in a cash journal and report them monthly. The totals for last year were:

Southern Health Center	**$740**
Western Health Center	**$710**
Eastern Health Clinic	**$640**
Northern Health Center	**$400**

The Mission Hospital reported that the supplementary food program cost approximately $1,000 to operate last year. Other expenses at the Mission Hospital (supplies, food services, laundry, etc.) were about $3,480.

At the Regional Hospital, all non-personnel expenses (except drugs and utilities) are recorded in the cash journal.

CASH JOURNAL REGISTER FOR REGIONAL HOSPITAL (in dollars)

ITEM	TOTAL EXPENSES LAST YEAR
Food	3,630
Uniforms	3,400
Laundry	2,670
Cleaning Supplies	2,850
Office Supplies	9,350
Outside Services	10,500
Total	32,400

a. Analysis

1. Calculate the total other expenses for last year. Enter the amounts on Worksheet 1-Summary, under the line item "Other."

2. Add up the totals for each facility to determine the other expenses for the Region as a whole. Enter this total in the last column on Worksheet 1-Summary, under the line item "Other."

b. Discussion

1. What would happen if the Hospital Administrator were to pay out $400.00 in gasoline and vehicle maintenance out of the petty cash fund - how would this transaction be recorded to make sure it goes against the correct line item in the budget?

Worksheet 1- Summary: Total Expenditures by Line Item and Facility

Line Item	Facility (in dollars)						
	Southern HC	Western HC	Eastern Clinic	Northern HC	Mission Hosp	Regional Hosp	TOTAL
1. Salaries/ Personnel							
2. Drug and Medical Supplies							
3. Vehicles and Transport							
4. Utilities							
5. Other							
TOTAL							

Worksheet 1- Summary: Total Expenditures by Line Item and Facility

Line Item	Facility (in dollars)						
	Southern HC	Western HC	Eastern Clinic	Northern HC	Mission Hosp	Regional Hosp	TOTAL
1. Salaries/ Personnel	15,500	25,750	5,500	21,750	52,250	156,250	277,000
2. Drug and Medical Supplies	3,436	3,436	3,436	3,436	15,310	44,675	73,729
3. Vehicles and Transport	0	0	0	0	2,000	17,850	19,850
4. Utilities	500	1,700	300	380	1,650	4,850	9,380
5. Other	740	710	640	400	4,480	32,400	39,370
TOTAL	20,176	31,596	9,876	25,966	75,690	256,025	419,329

Worksheet 1-a: Salary/Personnel Expenses by Facility (in dollars)

Facility	Southern HC			Western HC			Eastern Clinic			Northern HC			Mission Hosp			Regional Hosp		
Personnel Title	**No. Staff**	**Unit Cost**	**Total/ year**	**No. Staff**	**Unit Cost**	**Total /year**	**No. Staff**	**Unit Cost**	**Total /year**	**No. Staff**	**Unit Cost**	**Total /year**	**No. Staff**	**Unit Cost**	**Total /year**	**No. Staff**	**Unit Cost**	**Total/ year**
Physicians	0	9000		1	9000		0	9000		1	9000		2	9000		4	9000	
Pharmacists	0	6000		0	6000		0	6000		0	6000		0	6000		1	6000	
Administrator	0	5000		0	5000		0	5000		0	5000		0	5000		1	5000	
Secretaries	0	3500		0	3500		0	3500		0	3500		1	3500		3	3500	
Licenced Nurses	0	4000		1	4000		0	4000		0	4000		1	4000		4	4000	
Professional Nurses	2	3000		2	3000		1	3000		2	3000		3	3000		10	3000	
Auxiliary Nurses	1	1750		1	1750		1	1750		1	1750		2	1750		15	1750	
Laboratory Staff	1	2750		0	2750		0	2750		0	2750		1	2750		2	2750	
Health Promoters	1	3500		1	3500		0	3500		1	3500		0	3500		0	3500	
Drivers	0	2500		0	2500		0	2500		0	2500		1	2500		2	2500	
Other Auxiliary Staff	0	1250		0	1250		0	1250		0	1250		3	1250		5	1250	
Contracted Labor	2	750		2	750		1	750		2	750		7	750		13	750	
Community Health Workers	10	0		20	0		20	0		10	0		100	0		0	0	
TOTAL																		

Worksheet 1-a: Salary/Personnel Expenses by Facility (in dollars)

Facility	Southern HC			Western HC			Eastern Clinic			Northern HC			Mission Hosp			Regional Hosp		
Personnel Title	**No. Staff**	**Unit Cost**	**Total/ year**	**No. Staff**	**Unit Cost**	**Total/year**	**No. Staff**	**Unit Cost**	**Total /year**	**No. Staff**	**Unit Cost**	**Total /year**	**No. Staff**	**Unit Cost**	**Total/ year**	**No. Staff**	**Unit Cost**	**Total/ year**
Physicians	0	9000	0	1	9000	9000	0	9000	0	1	9000	9000	2	9000	18000	4	9000	36000
Pharmacists	0	6000	0	0	6000	0	0	6000	0	0	6000	0	0	6000	0	1	6000	6000
Administrator	0	5000	0	0	5000	0	0	5000	0	0	5000	0	0	5000	0	1	5000	5000
Secretaries	0	3500	0	0	3500	0	0	3500	0	0	3500	0	1	3500	3500	3	3500	10500
Licenced Nurses	0	4000	0	1	4000	4000	0	4000	0	0	4000	0	1	4000	4000	4	4000	16000
Professional Nurses	2	3000	6000	2	3000	6000	1	3000	3000	2	3000	6000	3	3000	9000	10	3000	30000
Auxiliary Nurses	1	1750	1750	1	1750	1750	1	1750	1750	1	1750	1750	2	1750	3500	15	1750	26250
Laboratory Staff	1	2750	2750	0	2750	0	0	2750	0	0	2750	0	1	2750	2750	2	2750	5500
Health Promoters	1	3500	3500	1	3500	3500	0	3500	0	1	3500	3500	0	3500	0	0	3500	0
Drivers	0	2500	0	0	2500	0	0	2500	0	0	2500	0	1	2500	2500	2	2500	5000
Other Auxiliary Staff	0	1250	0	0	1250	0	0	1250	0	0	1250	0	3	1250	3750	5	1250	6250
Contracted Labor	2	750	1500	2	750	1500	1	750	750	2	750	1500	7	750	5250	13	750	9750
Community Health Workers	10	0	0	20	0	0	20	0	0	10	0	0	100	0	0	0	0	0
TOTAL	15,500			25,750			5,500			21,750			52,250			156,250		

B. Performance Indicators

Now that all the line item expenditures for last year have been estimated, you can examine:

1. Where were resources spent?

2. Was the allocation of resources efficient and effective?

3. How might you change the spending patterns for next year to make better use of the resources and to include new programs or resource needs?

To answer these questions, you will need to calculate and analyze the financial performance indicators described above.

a. Analysis

1. Sum up the totals and rows of Worksheet 1-Summary to produce the first performance indicator: ***total expenditures by facility and expense category***.

2. Calculate the second performance indicator: ***percentage distribution of the regional and individual facility expenditures***. This should be done first by **line item**. Enter percentages on Worksheet 2. This should then be done by **facility**. Enter the percentages on Worksheet 3.

   Note that the percentages are sometimes easier to understand and compare than total numbers.

3. Next we calculate the third performance indicator: ***average cost per inhabitant using "outpatient equivalents."*** Enter the information on Worksheet 4.

Outpatient Equivalent

Since the Region treated both inpatients and outpatients, we would normally want to calculate a "cost per inpatient" and a "cost per outpatient" as the unit costs for the Region. Since we do not have the financial records separated by inpatient versus outpatient care, we can estimate something called an "Outpatient Equivalent." For purposes of this exercise, four outpatients are considered to be equal to one inpatient day. In other words, the amount of resources used during one inpatient day of treatment is equal to the resources used to treat four outpatients.

Average costs are calculated by dividing total costs associated with a particular product, service or facility by some unit of output. Average unit costs are useful for comparison among different facilities, strategies or geographic areas, because they correct for cost differences due to volume. If the services being provided are comparable (of the same type and quality), a lower average unit cost means that the facility was more efficient.

One problem which can arise in calculating average unit costs is how to distinguish which costs were incurred to produce which outputs. As explained above, if a facility's accounting system records all costs together regardless of type of patient treated, the concept of "Average Unit Cost" loses its meaning. Adding inpatients uses many more resources than outpatients, and we would expect the average unit cost per inpatient to be higher than the average cost per outpatient.

Creating a measure such as "Outpatient Equivalent" can provide a more comparable estimate of output; in the long-run, though, it is best to develop a cost accounting system, which distinguishes costs by "Responsibility Center" (inpatient service, outpatient department, pharmacy, etc.) or "Output" for which they were incurred.

Cost per inhabitant is another measure of performance. It is often used as one indicator of equity, although it does not distinguish equality of access to care by different socio-economic groups within a population.

b. Discussion

1. What changes will you make regarding resource allocation in the Region next year to improve the efficiency and effectiveness and equity of service delivery, based on these performance indicators?

2. Can we say anything about the equity of health care services from looking at the performance indicators?

Worksheet 2: Percentage Distribution of Facility Expenditures by Line Item

Line Item	Facility						
	Southern HC	Western HC	Eastern Clinic	Northern HC	Mission Hosp	Regional Hosp	TOTAL
1. Salaries/ Personnel	15,500	25,750	5,500	21,750	52,250	156,250	277,000
2. Drug and Medical Supplies	3,436	3,436	3,436	3,436	15,310	44,675	73,729
3. Vehicles and Transport	0	0	0	0	2,000	17,850	19,850
4. Utilities	500	1,700	300	380	1,650	4,850	9,380
5. Other	740	710	640	400	4,480	32,400	39,370
TOTAL	100% 20,176	100% 31,596	100% 9,876	100% 25,966	100% 75,690	100% 256,025	100% 419,329

Worksheet 3: Percentage Distribution of Line Item Expenditures by Facility

Line Item	Facility						
	Southern HC	Western HC	Eastern Clinic	Northern HC	Mission Hosp	Regional Hosp	TOTAL
1. Salaries/ Personnel	15,500	25,750	5,500	21,750	52,250	156,250	100% 277,000
2. Drug and Medical Supplies	3,436	3,436	3,436	3,436	15,310	44,675	100% 73,729
3. Vehicles and Transport	0	0	0	0	2,000	17,850	100% 19,850
4. Utilities	500	1,700	300	380	1,650	4,850	100% 9,380
5. Other	740	710	640	400	4,480	32,400	100% 39,370
TOTAL	20,176	31,596	9,876	25,966	75,690	256,025	100% 419,329

Worksheet 2: Percentage Distribution of Facility Expenditures by Line Item

Line Item	Facility						
	Southern HC	Western HC	Eastern Clinic	Northern HC	Mission Hosp	Regional Hosp	TOTAL
1. Salaries/ Personnel	77%	82%	56%	84%	69%	61%	66%
2. Drug and Medical Supplies	17%	11%	35%	13%	20%	17%	17%
3. Vehicles and Transport	0%	0%	0%	0%	3%	7%	5%
4. Utilities	2%	5%	3%	1.5%	2%	2%	2%
5. Other	4%	2%	6%	1.5%	6%	13%	10%
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Worksheet 3: Percentage Distribution of Line Item Expenditures by Facility

Line Item	Facility						
	Southern HC	Western HC	Eastern Clinic	Northern HC	Mission Hosp	Regional Hosp	TOTAL
1. Salaries/ Personnel	6%	9%	2%	8%	19%	56%	**100%**
2. Drug and Medical Supplies	5%	5%	5%	5%	20%	60%	**100%**
3. Vehicles and Transport	0%	0%	0%	0%	10%	90%	**100%**
4. Utilities	5%	18%	3%	4%	18%	52%	**100%**
5. Other	2%	2%	2%	1%	11%	82%	**100%**
TOTAL	5%	8%	2%	6%	18%	61%	**100%**

Worksheet 4: Outpatient Equivalents/Average Cost Per Inhabitant

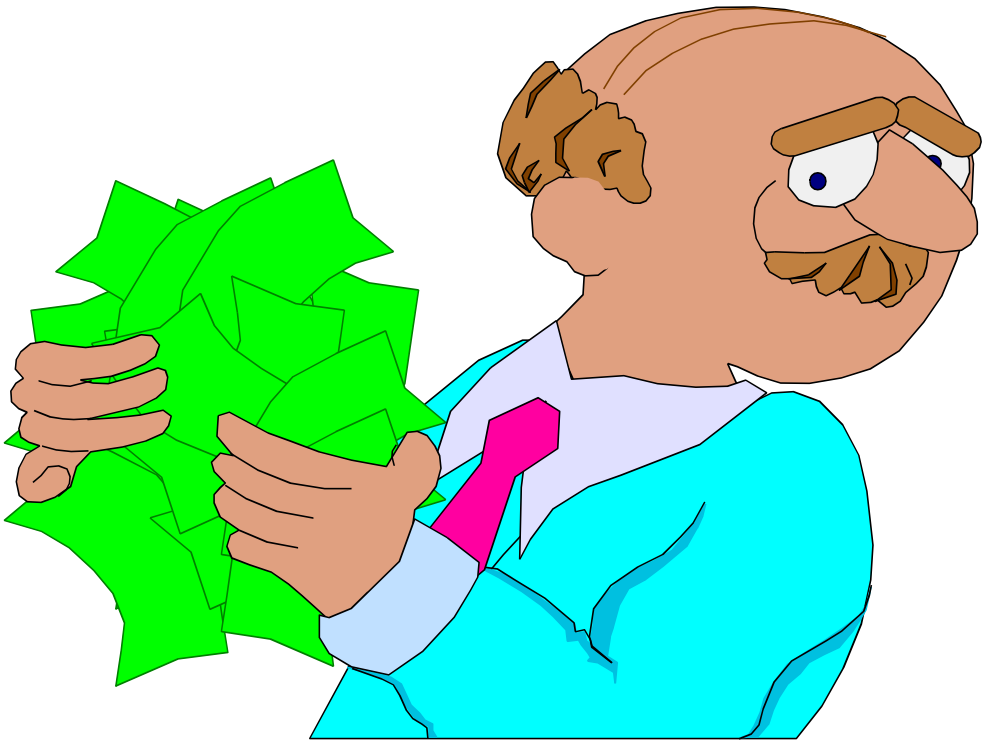
Line Item	Facility (in dollars)						
	A	B	C	D	E	F	G
	Inpatient Days Taken from Table 3	Outpatient Visits Taken from Table 3	Outpatient Equivalents= Inpatient Days from Column A x 4 + Outpatient Visits from Column B	Total Costs Taken from Worksheet 1 -Summary Totals	Cost per Outpatient Equivalent = Column D / Column C	Target Population	Avg. Cost per Inhabitant = Column D / Column F
Southern HC	219	4164		$20,176		20,000	
Western HC	730	16000		$31,596		20,000	
Eastern Clinic	0	15643		$9,876		30,000	
Northern HC	236	7484		$25,966		12,000	
Mission Hosp	2734	8956		$75,690		8,000	
Regional Hosp	23474	30812		$256,025		10,000	
TOTAL	27393	83059		$419,329		100,000	

Worksheet 4: Outpatient Equivalents/Average Cost Per Inhabitant

Line Item	Facility (in dollars)						
	A	B	C	D	E	F	G
	Inpatient Days Taken from Table 3	Outpatient Visits Taken from Table 3	Outpatient Equivalents= Inpatient Days from Column A x 4 + Outpatient Visits from Column B	Total Costs Taken from Worksheet 1 -Summary Totals	Cost per Outpatient Equivalent = Column D / Column C	Target Population	Avg. Cost per Inhabitant = Column D / Column F
Southern HC	219	4164	5040	$20,176	$4.00	20,000	$1.01
Western HC	730	16000	18920	$31,596	$1.66	20,000	$1.58
Eastern Clinic	0	15643	15643	$9,876	$0.63	30,000	$0.33
Northern HC	236	7484	8428	$25,966	$3.08	12,000	$2.16
Mission Hosp	2734	8956	19892	$75,690	$3.80	8,000	$9.46
Regional Hosp	23474	30812	124708	$256,025	$2.05	10,000	$25.60
TOTAL	27393	83059	192631	$419,329	$2.18	100,000	$4.19

PART IV:

Exploring Alternative Financing Mechanisms for Cost Recovery



Part I:

An international donor had offered the Region of *Doubledrift* $25,000 for the purchase of capital equipment to support its Maternal-Child Health Program. As members of the Regional Health Team, you have asked your colleagues to suggest ways in which the money might be spent. Your colleagues have submitted for your review a list of the following proposals:

1. ***Establish a Health Education Materials Production Center.*** This Center would have 3 ultramodern computers, each with a multimedia mini-tower, 233 MHz Intel Pentium processor, 32 MB RAM, 4.0 gigabyte hard-disk, a 17" color monitor, a 33.6 data/fax modem, CD-ROM (24x), K56 Flex, 64-Bit graphics with direct 3D, 1 MB VRAM, audio stereo speakers, 3 color printers, a fax machine, a scanner, a video display projector, a UPS, e-mail connectivity and accounts for each computer, and a high-speed color photocopier. The computer will be equipped with basic software, as well as the latest version of Desk Top Publisher.

2. ***Purchase a New Toshiba Ultrasound Machine.*** This technological innovation would come equipped with vaginal and abdominal tranducers, as well as a Doppler device for prenatal visits.

3. ***Construct a Training Center for Short-term Courses.*** This Training Center would measure 45 ft. x 30 ft. (13.72 x 9.14 meters). It would be equipped with 6 rectangular tables, 36 chairs, a white board, an overhead projector, 4 flip charts, a color TV/VCR, and a slide projector and screen. In addition, the training center would have with a small kitchenette, complete with a microwave oven; a small fridge; a coffee maker; and cups, saucers, plates and silverware for 36 persons.

Analysis:

Refer to Proposal Evaluation Worksheet.

1. Assume the capital cost of each proposal is $25,000

2. Prepare a list of criteria that you would use to evaluate each proposal (see Worksheet).

3. Which proposal would you select and why?

Worksheet: Criteria for the Evaluation of the Proposals

1 2 3 4 5

Meets Criteria..... no.....partially.....yes.....

CRITERIA (in order of priority)	PROPOSAL I	PROPOSAL II	PROPOSAL III	**JUSTIFICATION**
TOTALS				

Part II:

As you look closer at the fine print, you notice that there are specific conditions attached to the donation. For instance, the Maternal-Child Health Program must assume full financial responsibility for any recurrent costs resulting from the purchase of capital equipment.

Analysis:

Refer to Cost-Recovery Analysis Worksheet.

1. Prepare a list of all of the possible recurrent costs for each of the proposals. Examples of recurrent costs might be: maintenance, supplies, etc.

2. Propose some ways in which you might recover the recurrent costs incurred by each of the proposals. Assume that all recurrent costs surpass the Regional budget.

3. Now determine which proposal is more feasible and appropriate.

4. Is there an alternative proposal which you feel might benefit the MCH Program more than the three presented?

Worksheet: Cost Recovery Analysis

PROPOSAL I:

Health Education Materials Production Center

Recurrent Costs	Recovery Mechanisms

Worksheet: Cost Recovery Analysis

PROPOSAL II:

New Toshiba Ultrasound Machine

Recurrent Costs	Recovery Mechanisms

Worksheet: Cost Recovery Analysis

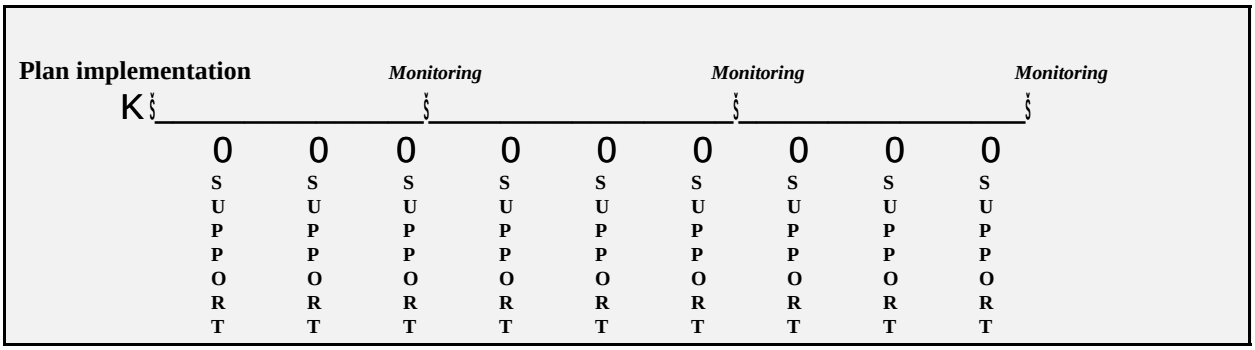
PROPOSAL III:

Training Center for Short-term Courses

Recurrent Costs	Recovery Mechanisms

PART V:

Supporting and Monitoring the Implementation of the Plan

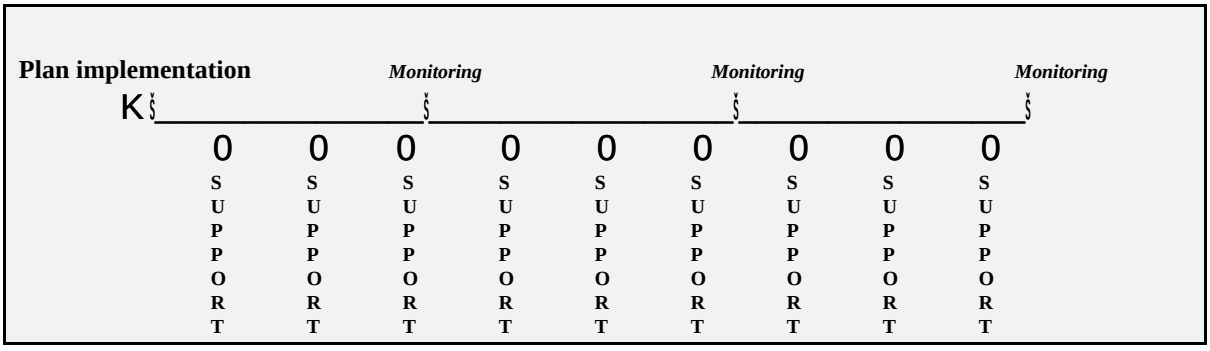


A. The Process

Preparing and implementing operational plans at different levels of the health care system means that, aside from supporting and monitoring activities at their respective levels, the participants should think about ways in which they can support and monitor the implementation of activities at the lower tiers of the health care delivery system. These supporting and monitoring activities should be programmed in their operational plans.

The process for supporting and monitoring an operational plan is cyclical. Support is provided by the higher levels of the system to the lower tiers of the system on a continuous basis, in those specific areas deemed essential for the execution of activities and the production of outputs as outlined in the operational plan. Monitoring, on the other hand, occurs at pre-determined intervals. Monitoring is done to assess the degree to which outputs have been produced and to reveal and resolve any problems impeding progress. The results of the monitoring visits are used to identify the support required during the next implementation interval.

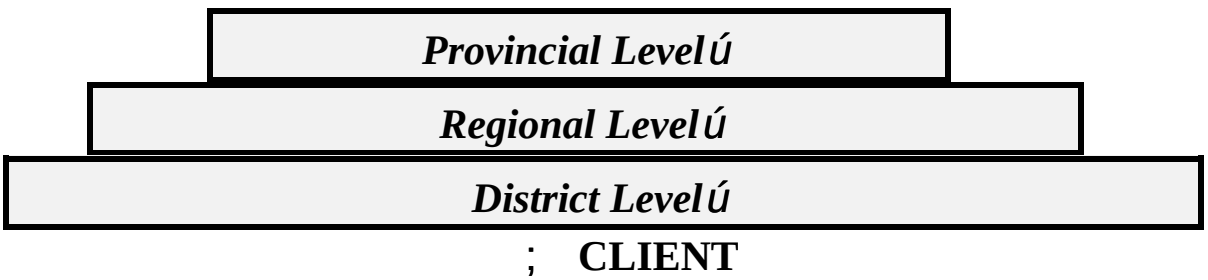
Below is a depiction of the operational plan support and monitoring process.



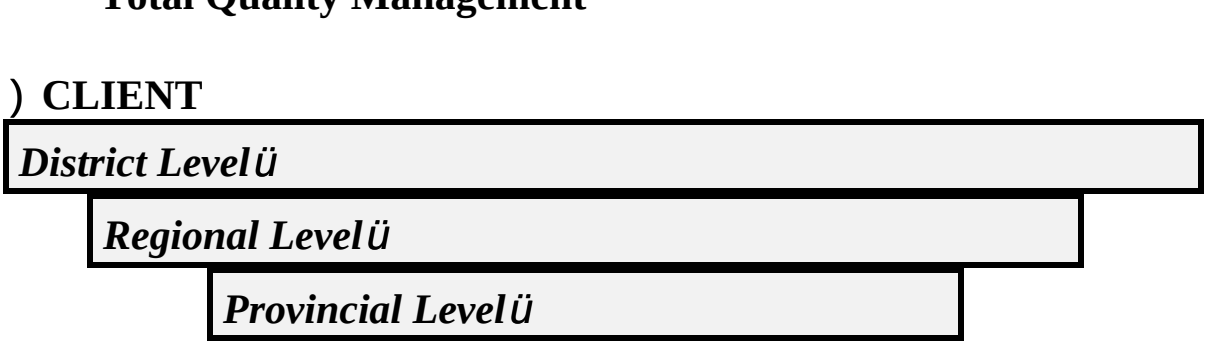
1. Supporting the Implementation of the Operational Plan

One of the most striking aspects of the Total Quality Management movement is its insistence on inverting the organizational pyramid to suggest that all mid- and senior level managers must work to support the "first contact" staff, since it is they who have direct contact with the clients and are best positioned to assess the clients' needs and preferences.

Traditional Management



Total Quality Management requires that all non-first contact staff members work to support their "first contact" colleagues. This model is particularly applicable in the health care setting, where clinic staff require training, materials, supervision, monitoring and guidance from the regional level, who, in turn, depend upon the provincial level for policies, norms, protocols, budgets, and staff. At the same time, each level requires specific support from their subordinate level, such as data from the district level, and financial reports from the regional level. Moreover, each level depends upon its own staff to support its efforts. This is especially evident at the higher levels, where collaboration is imperative.



To support the implementation of operational plans, at all levels, the participants should be prepared to help their organizations to improve their management structures, skills and systems, specifically in the areas of: organizational structure, personnel development, team work, leadership, delegation, supervision, motivation, information systems, supplies and logistics management, and financial management.

2. Monitoring the Implementation of the Operational Plan

Monitoring is the process of measuring, coordinating, collecting, processing, and communicating information of assistance to managers and decision-makers. It is a critical part of the implementation phase of an operational plan, since it provides feedback that can be used to modify the plan and identify areas in which additional support is required.

The sources of information used in monitoring activities and outputs include monthly, quarterly, and annual reports; data on notifiable diseases; and special surveys. The results of the monitoring instruments should identify immediate problems or deviations from the established plan and to find quick, practical solutions. Monitoring is based on a comparison between programmed activities and outputs and actual performance.

Group Exercise: Using the PDA to Identify Areas of Support Needed to Implement Plan

Generally, we pass through different stages of professional development. As an individual matures professionally, s/he demonstrates capabilities that characterize each stage. To help identify these stages, one can conduct a Personnel Development Assessment (PDA) to observe and measure the degree of professional development in staff. These observations and measurements are used to determine where an individual or group of individuals need support to improve management structures, expand their own skills, and implement management systems. Once the stage of development of the individual is known, a professional support plan can be developed to assist with moving the staff member to a more advanced stage of professional development.

The Personnel Development Assessment (PDA)

The Personnel Development Assessment is a 4 step methodology that allows an organization or a program to collect, analyze, and use information to develop its staff, in 4 progressive stages, which can be based on weeks, quarters, or some other time interval. The PDA should be carried out by those responsible for monitoring the implementation of the operational plans.

Example: The Steps and Processes of the PDA Cycle

Steps	Process
Create a Management Skills Map	*To create a management skills map, you need to select the key management areas necessary for the functioning of the individual or group of individuals in their organization or program. These might include: organizational structure, personnel development, leadership, financial management, etc. Next, you need to develop indicators showing what is expected from each management area. Both the management areas and the corresponding indicators should be drawn from the operational plans. Finally, you establish characteristics for each indicator. These characteristics are plotted along the different support stages, reflecting, in each successive horizontal cell, a degree of measurable progression from the preceding cell. The characteristics and the management areas should be specific to the functions of the individual.*
Develop the Personnel Development Support Plan	*The results from the assessment should be used to develop a personnel development support plan, which will describe the types and level of support needed by the particular individual. This might include: management coaching, on-site training, formal training, supervision, or materials support.*
Monitor the Operational Plan	*Once the management skills map has been completed, you need to conduct periodic monitoring of the implementation of the operational plan.*
Analyze the Results of Monitoring	*Once analyzed by the monitoring team, the monitoring results will indicate to you: 1) where your staff or supervisee is on their personnel development continuum for each of the management indicators you have developed; 2) whether or not you need to revise the reference criteria to be more or less ambitious; and 3) what areas of support are required by the individual to enter the next stage of development.*

Example: Management areas requiring *Support* from higher tiers	
Organizational Structure	*To achieve projected outputs more easily, it might be necessary to change the organizational structure to link service and managerial functions.*
Personnel Development	*The types of personnel required at each level of the health care system will depend on the local situation; however, the level of manpower and skills should match the activities that need to be carried out. It is important to review staff distribution, their performance, and their training needs on a systematic basis.*
Team Work	*Teamwork should be synonymous with synergy: a state in which the collective skills, knowledge and practices of others are pooled to generate a result that is greater than the sum of the individual parts. Well-functioning teams have a significant influence on improving effectiveness and productivity, but they do not occur by accident. Strong teams are comprised of individuals who can contribute complementary skills and experiences to the group effort.*
Leadership	*Leadership means influencing others so that they achieve specific goals. This means working with others to define realistic goals, and then delegating tasks, supervising activities and motivating staff to enure the goals are met.*
Delegation	*Delegation can be defined as "investing subordinates with the authority to perform the manager's job on the manager's behalf." The starting point in the delegation process is to examine the managers' job descriptions to determine which tasks can be assigned to a subordinate.*
Supervision	*Though supportive supervision of health personnel is recognized as an important factor in good management, it is often infrequent, of poor quality, and viewed as a form of "inspection." For this reason, an effort should be made to establish a supervisory system to support and encourage the timely and effective implementation of activities.*
Motivation	*In the management context, motivation refers to those efforts made to help staff carry out their tasks responsibly and efficiently, while encouraging them to strive for higher achievements. As a supervisor, you can be a powerful motivating force for your staff even if you can't motivate them through increased financial incentive by recognizing their performance, coaching them, providing training and opportunities for advancement.*
Information Systems	*A management information system (MIS) systematically gathers information on a variety of different functions in an organization or program in order to permit a manager to plan, monitor, and evaluate the operations and the performance his/her organization, program, or project.*
Supplies and Logistics Systems	*Adequate support for the health care system demands strong management of drugs and supplies, including their procurement, distribution, and transport, as well as the maintenance of buildings and equipment.*
Financial Management	*The hallmark of a good manager is the ability to use resources efficiently. There are 3 major financial considerations at the lower tiers of the health care system: the ways in which resources are allocated and controlled at more central levels; the allocation and management of resources at the middle level (district); and the mobilization and use of local financial resources for primary health care.*

Example: The Personnel Development Assessment Instrument - MSH

Management Area and Indicators	Characteristics			
	Stage I of Support	Stage II of Support	Stage III of Support	Stage IV of Support
Management Area				
Indicators				
Management Area				
Indicators				
Management Area				
Indicators				
Management Area				
Indicators				

Worksheet: Plan Implementation Support Assessment

Management Area	Support Required

Worksheet: Monitoring of Plan Implementation

Objectives	Activities	Outputs	Person(s) Responsible	Time line											
				J	F	M	A	M	J	J	A	S	O	N	D

MONITORING NOTES:

The Activities

1. Were all of the activities executed? **YES** **NO**
If not, which ones were not and why?_____
_____

2. Were all of the activities executed on time? **YES** **NO**
If not, which ones were not and why?_____
_____

3. Did the person(s) responsible execute the activities? **YES** **NO**
If not, why?_____
_____

4. Do any of the activities need to be rescheduled? **YES** **NO**
Which ones?_____
_____

5. Do any of the activities need to be canceled? **YES** **NO**
Which ones?_____
_____

6. Should additional activities be programmed? **YES** **NO**
Which ones?_____
_____

MONITORING NOTES:

The Outputs

1.Were all of the outputs produced? **YES** **NO**
If not, which ones were not and why?_____
_____

2.Were all of the outputs produced on time? **YES** **NO**
If not, which ones were not and why?_____
_____

3. Did the person(s) responsible produce the outputs? **YES** **NO**
If not, why?_____
_____

4. Do any of the outputs need to be redefined? **YES** **NO**
Which ones?_____
_____

5. Do any of the outputs need to be eliminated? **YES** **NO**
Which ones?_____
_____

6. Should additional outputs be programmed? **YES** **NO**
Which ones?_____
_____

Trouble in Paradise: A Call for Support

PROBLEM 1: Authoritarian Attitude of the Regional Health Administrator

The Regional Health Administrator is a man in his early fifties. He started work as an auxiliary nurse, went back to school and after passing his examinations, became a clerk in the Regional Hospital. He has attended every course offered and through hard work has progressed to the senior post of Regional Health Administrator. He works at the Regional Hospital, and has a young assistant fresh from training school. The two previous Assistant Administrators left within three months of appointment.

Despite several requests, the Administrator has refused transfer from the Region. He has a house at the hospital where he can observe all activities. In addition, his wife works as the secretary for the Regional Medical Officer.

Being the most experienced member of staff, he knows the government regulations very well; he often boasts that the auditors never find anything wrong.

The problem is that other staff members, the doctors, nurses, and pharmacist find him rigid and uncooperative. Behind his back they call him Mr. NO.

With the new move toward decentralization concerns have been raised as to whether this Administrator will be an asset or an obstacle to the effort.

He is in excellent health and the official retirement age is 60 years.

Task:

1. What is the problem?
2. Which management area requires support?
3. How can you provide support to this situation?

PROBLEM 2: Unreliable Laboratory Staff

The Regional Hospital laboratory is staffed by two Laboratory Assistants. There should be a Laboratory Technician, but the last one left because the accommodation provided was unsuitable.

Both Lab Assistants were trained more than ten years ago, and have not participated in a refresher course. The two do not get along with each other partly because one is a Christian and drinks alcohol, and the other is a Jehovah's Disciple. They also live next to each other on the Regional Hospital grounds, and their children are often fighting.

Staff at the hospital have a problem with the reliability of the laboratory results. The medical staff joke that

the results depend more on who did the test, and on the time of day, than on the patient's condition. There have also been problems with the laboratory staff being unavailable when called.

The laboratory staff complain that much of their equipment is old. What new equipment they have did not come with instructions. They also point out that the medical staff are always complaining: always wanting the tests done immediately. One setback is that requests for tests are sent to the lab at all times of the day, making it impossible to do tests in batches.

The laboratory staff also point out that the work load at the Regional Hospital has increased by 50% over the last 3 years while the facilities, staff, and equipment have remained the same.

Finally, the Laboratory Assistants complain that the Laboratory Technicians at the Regional Hospital have received a salary increase, but they as assistants have not.

Task:

1. What is the problem?
2. Which management area requires support?
3. How can you provide support to this situation?

PROBLEM 3: Feeling of Isolation of the Staff in the Region

During the last meeting of the Regional professional staff, one of the best District Health Promoters stood up and complained that he felt his work was being largely unnoticed.

He was strongly supported by his fellow staff members who said that their training and knowledge were being wasted, and that when senior staff members came to visit they were only interested in their records of activities, or in showing donor's successful projects.

The Regional Medical Officer agreed with these sentiments, adding that he used to subscribe to a medical journal but that it was too expensive. He said that at one time he had asked a surgeon from the Provincial Hospital to visit the Region to give a presentation of the latest advances in a specific surgical procedure, but that no-one would pay the surgeon's gas costs.

The feeling of isolation is compounded by comments from the regional staff members that "real medicine can't be practiced in the bush."

As a result of these problems there is a rapid turnover of staff.

Task:

1. What is the problem?
2. Which management area requires support?
3. How can you provide support to this situation?

PROBLEM 4: Religious Problems

The Mission Hospital is in the Northern District. The staff there discourage the use of contraceptives, though they do provide instruction about the rhythm method. The Mission gets about 1/3 of its drugs from the government, and salaries are paid through a grant from the Mission Headquarters. There is a national policy that family planning will be promoted at all health facilities. A recent grant from UNFPA is dependent on a decrease in the birth rate. At a recent meeting, the missionaries stated that they would rather abandon their mission hospital and leave the country than commit this sin.

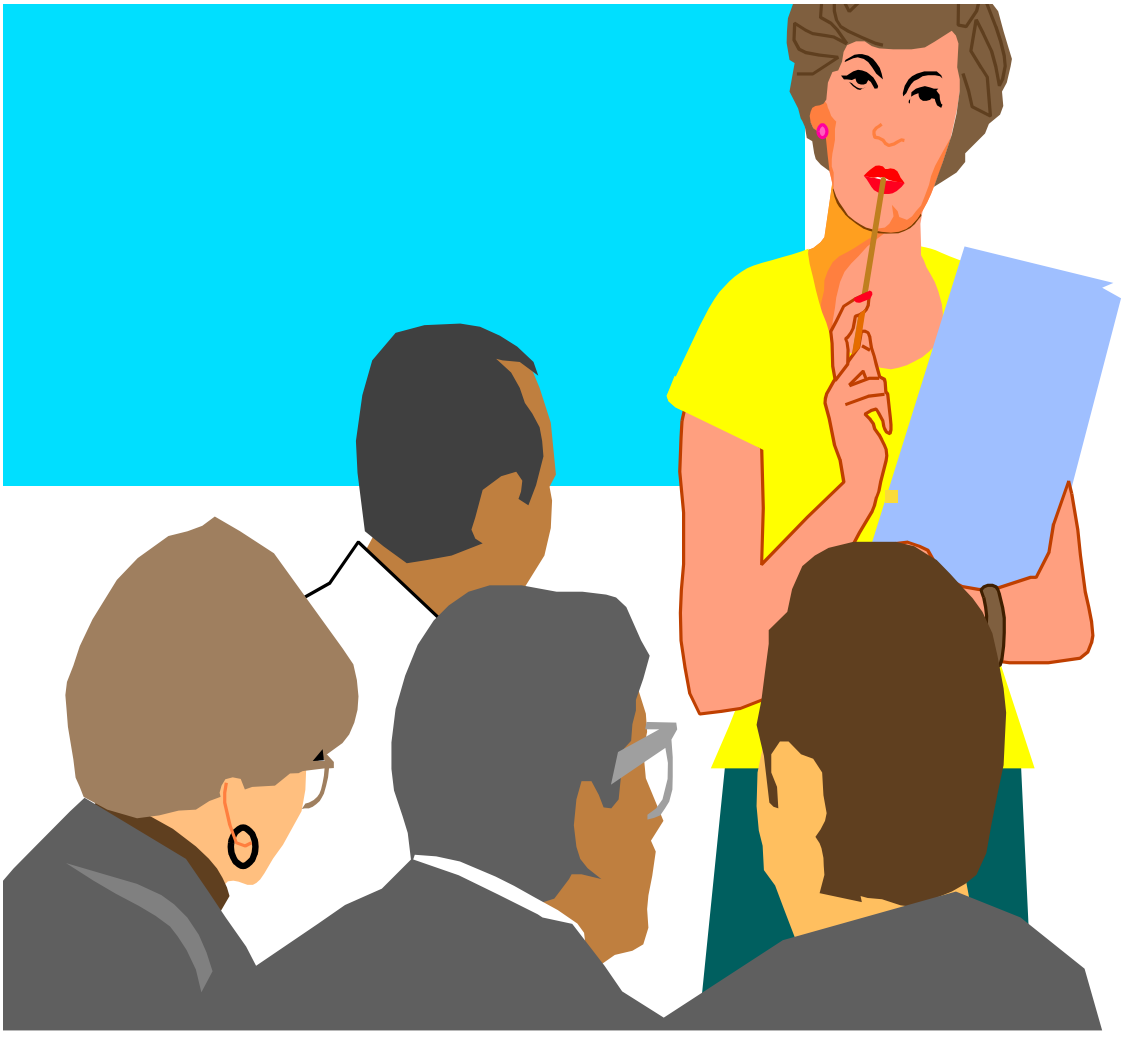
The local community has sent a delegation to the Regional Health Office stating that they want the missionaries to stay, but that they also want family planning services. They suggested that a new clinic be built outside the gates of the Mission Hospital to provide family planning.

Task:

1. What is the problem?
2. Which management area requires support?
3. How can you provide support to this situation?

Trainer's Notes

For the Practical Lessons and Workbook
for Managing Decentralized Health Systems



Introduction to Case Study and Planning

I. Introduction

Decentralization is one of the hot topics of the day; be it referred to as health sector reform, modernization, regionalization, privatization, devolution, or re-engineering, this effort implies change.

In response to this global thrust towards decentralization, and using as its backdrop the fictitious country of *Graceland*, Management Sciences for Health (MSH), through its Family Planning Management Development Project (FPMD), has created a case study that transforms the classroom into a living laboratory. This five-part case study is designed to look at the need to plan for change in the face of uncertainty, and the need to analyze data and resources to determine what reforms are required and feasible to ensure the successful transition to a decentralized health system. The case also examines the need to create leaders who can design, execute, manage and evaluate strategic and operational plans that are responsive to their expanding roles and changing environment.

The goal of the case study is to take a holistic approach to developing the participant's ability to draft *and* execute comprehensive and contextually appropriate strategic and operational plans. The case study culminates in the elaboration of group strategic and operational plans in response to a case study.

To supplement the preparation of plans with the development of management skills, the case focuses on five planning questions, each of which is addressed in one part of the case study: *Part 1. Where are we now? Part 2. Where do we want to go? Part 3. How will we get there? Part 4. What will we do to get there,* and *Part 5. How will we know when we have arrived?*

II. Objectives

This case is designed to combine a broad range of teaching methods and techniques that will enable participants and their organizations to:

- draft responsive strategic and operational plans
- program and manage the delivery of health services at the district level
- execute key management functions at the district level
- support and monitor district health operations
- apply gained leadership abilities to enhance effectiveness as a manager and change agent

III. Methodology and Instructional Materials

The design of this training program is based on the principles of adult education, which respects participants' previous professional training and experience as integral to the learning process. The principles to be applied to this case include: 1) active participation of all participants; 2) an interdependent relationship between participants and trainers in which knowledge and power, as well as responsibility for the learning process and outcomes, are shared; and 3) a focus on learning how to learn, so that participants complete the case study with the ability to continue learning once they return to the workplace.

To incorporate into the case study these principles of adult education, the trainer should be prepared to use numerous techniques, such as: small and large group discussions, including work groups, support groups, and standing committees; vignettes; role playing; presentations; debates; panel discussions; and other participatory techniques.

For each of the case study components, there should be two trainers on hand: one to function as the lead trainer; the other to serve as a group facilitator. In this fashion, those portions of the case study for group work will be closely monitored, and participants will receive individualized attention.

IV. An Overview of Strategic and Operational Planning

The health needs and issues of the developing world are many and varied. In addition, the infrastructure which has been developed to respond to those needs is extensive and complex, while the resources which are available for its operation are severely constrained. Plans help managers to direct scarce resources to those activities that will produce the most impact.

A. What is a Work Plan?

A work plan functions like a blueprint: it identifies the steps required to achieve a larger goal. For example, identification of information needs, design of data collection and reporting forms, and training of personnel are three of the steps in the development of an information system. Aside from guiding managers and planners through a series of steps, however, work plans also provide some of the required information and an opportunity to review the feasibility of the larger goal. Although the goal may be to improve the overall health status of a specific target population, if the resources do not exist to complete even the most fundamental steps, it will be necessary to either (1) adjust the goal to make it attainable or (2) find the additional resources required for its achievement.

In addition, health problems and the availability of resources with which to address them change from time to time. Such changes are likely to be particularly frequent during reform processes such as those currently occurring throughout the developing world. Good work plans must, therefore, be flexible. Effective

managers use work plans as guidelines rather than as rigid, unalterable prescriptions. They make adjustments to their work plans in accordance with changing circumstances.

B. Why do we Plan?

We plan because the supply of material, financial and human resources is limited. A carefully developed work plan is the best way to guarantee that these limited resources are organized and used productively.

Two alternative contexts exist in which work plans may be developed. First, the quantity of resources available may be known with considerable accuracy. In this context, a work plan may be developed to guide and achieve the maximum possible progress toward a goal within the existing resource constraints. In the second context, the availability of resources may be less rigidly constrained, a work plan may created to justify a request for the resources required to reach the desired goal. Regardless of whether the work plan is developed before or after the allocation of resources, it is intended to assure the maximum possible achievement with those resources.

C. What is the Planning Process?

Work plans can and should be developed for different levels and over distinct periods of time. They may be developed for the central, provincial, regional, district and facility levels. They may also be developed by and for individuals. Similarly, work plans can be developed every five years, annually, quarterly, monthly or weekly. The appropriate type of plan depends on the manager's needs.

The work plan process or cycle can be reduced to five essential questions:

1. Where are we now? (health assessment, management assessment)
2. Where do we want to be? (goals, objectives)
3. Generally, how will we get there? (strategies)
4. Specifically, what will we do? (activities, outputs, resources, time)
5. How will we know if we are making progress? (support, monitoring, evaluation)

Perhaps more than a cycle, planning is a continuum made up of a series of *whats* and *hows*. *What* are you going to do? Create a vision, identify goals, establish objectives, and program outputs. *How* are you going to do this? By drafting a mission, selecting strategies, and scheduling activities.

The Planning Continuum:

What & How

Strategic Planning (2 or more years)

WHAT?	**Vision**	**Goals**	**Objectives**	**Outputs**
HOW?	**Mission (WHY?)**	**Strategies**	**Activities**	

Operational Planning (1 year or less)

A ***Strategic Plan*** helps identify, in general terms, how we will get where we want to go by identifying the general method (Question #3) the organization will apply to progress from the current situation (Question #1) to the desired situation (Question #2). Strategic plans usually state and focus on the organization's fundamental goals. They may also identify and prioritize the component objectives of its general goals.

Strategic plans direct the overall effort of the organization and are prepared and approved by top management, using information from all levels of the organization. Completed strategic plans are then disseminated to the lower-tiers of the organization, so that pertinent operational plans can be drafted.

Strategic Planning Process

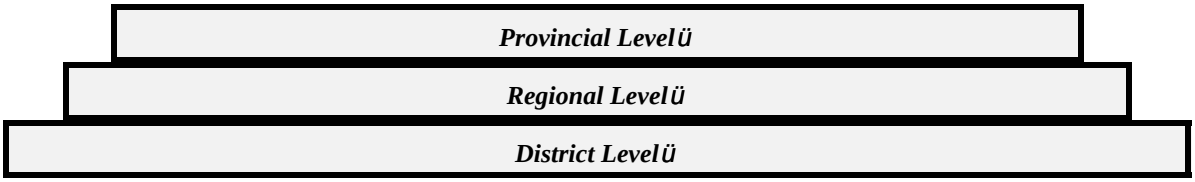
Strategic plans for the health sector require a clear understanding of the present health, demographic, and socio-economic status of the population, and a strong sense of the extent to which conditions can be improved in a given period of time. They also require a thorough understanding of the technologies and/or interventions (the methods or "strategies") that should be applied to achieve the greatest progress. Finally, they require substantial knowledge of the types and quantities of resources required to implement specific interventions, as well as the feasibility of obtaining those resources.

Strategic plans usually extend over for several years. Because they focus on fundamental medium to long term goals and objectives, they are often used to justify the allocation of resources to achieve a desired, relatively ambitious set of goals. Strategic plans are normally reviewed only once every year or two.

Once a strategic plan is developed and approved, staff at ***all levels*** should develop detailed ***Operational Plans***, which translate the general strategies outlined in the strategic plan into a comprehensive package of specific activities (Question #4) that will best help us to implement the strategies. Operational plans rarely extend beyond a year and should probably be reviewed at least monthly and adjusted quarterly. Generally, each activity and the total set of activities selected for an operational plan should be feasible within given resource constraints. Operational plans are not usually used to justify the allocation of resources.

Operational planning should be from the bottom up to the extent that higher levels in the organization should include in their plans the support required by lower level(s).

Operational Planning Process



The activities included in an operational plan should be sufficiently detailed to assure the timeous identification of delays that may retard overall implementation of the strategy. An operational plan guides managers' daily decision-making.

D. How do we Check the Progress of our Plans?

While the third and fourth questions guide the implementation of a work plan, the fifth, *"How will we know if we are making progress?"* requires measurement of how much has been accomplished toward meeting the established goals. To "evaluate" progress towards the goals contained in **strategic plans**, SMART (specific, measurable, appropriate, realistic and time-bound) objectives are often used. Partial or complete fulfillment of an objectives "indicates" that progress has been made. Evaluations are most often scheduled so that their results support reviews of strategic plans. The frequency and timing of evaluations should be included in the strategic plan. The strategic focus of evaluations implies the interest and involvement of the organization's top management. To assure objectivity, evaluators are often recruited from outside the organization, or from a section of the organization that is not directly involved in the implementation of the strategic plan.

To "monitor" the progress or completion of the activities in **operational plans**, "outputs" (often documents) are usually identified that enable the manager to objectively determine if an activity is progressing or has been completed. The outputs included in operational plans constitute the indicators of progress. It is assumed that, if all the activities are executed as scheduled, the anticipated progress in strategy implementation and goal achievement will have also been made.

Monitoring is a joint responsibility of both supervisors and supervised staff and should occur continually; it should include comprehensive monthly and/or quarterly reviews that result in adjustments to the operational plan, as well as scheduled support across and between the various levels of the organization. These reviews included in the operational plan.

Both evaluation and monitoring activities should result in the identification of support needs; be they across Programs, Units, Branches, or Directorates, at the central or provincial level, or between the various levels of the system, those responsible for evaluating and monitoring the progress of the plans should recommend where and how performance needs to be improved, so that the plans can be implemented with the greatest success possible.

Case Guide

Part I: Data for Decision-Making at the District Level

Purpose:

In order to address the question "Where are we?", it is important to get an idea of the environment in which we live and work. To do this, it is helpful to conduct a situational analysis.

During this first part of the case study, the participants are introduced to the fictitious country of *Graceland* and the Region of *Doubledrift*. The participants are asked to review closely all of the data and information that describes the geographical, political, economic, social and health conditions in both the country and in the particular Region.

The purpose or reason for collecting data is to use it in making decisions. All of the aspects of data collection evolve from this goal. In preparing a work plan, there are really two purposes: to identify a problem, and thereby a focus for the activities; and to establish the present situation against that which is desired.

This portion of the case study combines theory and practice to explore the types of data that can be collected, the various methods and techniques for collecting data, and the ways in which data can be manipulated and transformed into information.

Duration: 1 full day

Questions:

Upon completing Part I of the case study, participants should be able to answer the following questions:

1. What are some of the ways in which we collect data?

2. What is the difference between quantitative and qualitative data?

3. What is the difference among indicators, rates, ratios and proportions?

4. How does data become information?

Trainer's Notes

Part I: Data for Decision-Making at the District Level

Questions/Exercises	Activities	Time	Instructional Aids
What are some of the ways in which we collect data?	Review of case questions Video about Graceland/Doubledrift Break into groups and complete worksheets on narrative Groups present findings	8:30-10:30	Video, TV/VCR, Case study Flip Chart and Paper Overheads Worksheets
BREAK		10:30-10:45	
What is the difference between quantitative and qualitative data?	Brainstorm about types of data presented in narrative, and how it might have been collected Brainstorm about difference between quantitative and qualitative data, using examples from narrative Present definitions	10:45-11:30	Flip Chart and Paper Overheads
What is the difference among indicators, rates, ratios and proportions?	Walk participants through tables and calculation sheets Present definitions of indicators, rates, ratios and proportions	11:30-1:00	Flip Chart and Paper Overheads Handouts with definitions Worksheets
How does data become information?	Participants do calculations, by District Analyze issues of equity, access and coverage Group presentations	2:00-5:00	Flip Chart and Paper Overheads Worksheets Calculators

QUANTITATIVE DATA

This refers to numbers and amounts. Normally, quantitative data is generated by the use of pre-coded forms or surveys made up of close-ended questions.

QUALITATIVE DATA

This refers to that which can not be measured or quantified easily, such as attitudes, values, etc. Normally, qualitative data is generated by asking open-ended questions. An information system can generate both quantitative and qualitative data. In addition, qualitative questions can illicit measurable responses if a value is attached to the response either before or after the data collection phase.

INDICATORS

Indicators are operational measures of the components in a conceptual framework. Once a baseline value has been established for the indicator, it can be monitored over time to see how well program services are being supplied and used and whether the targeted change is being achieved. According to WHO, a good indicator should be: valid, reliable, specific, sensitive, and operational. In addition, indicators should be readily available from existing data sources or obtained on a regular basis at a reasonable cost.

Case Guide

Part II: The Planning Process and Mortality Mapping

Purpose:

As we review the needs and issues surrounding the your respective countries, and their corresponding provinces, regions and districts, no doubt a number of ideas come to mind to improve the health situation. Because it is difficult to cultivate a single idea without knowing its place in the bigger picture, people generally develop work plans.

This portion of the case study examines what a work plan is; why we plan; and the planning process, both strategic and operational. It also shows how the work plan process or cycle can be reduced to five basic planning questions. The session culminates with an exercise in mortality mapping.

Duration: 4 hours

Questions:

Upon completing Part II of the case study, participants should be able to answer the following questions:

1. What is a work plan?
2. Why do we plan?
3. What is the planning process?
4. How do we evaluate our plans?

Trainer's Notes

Part II: The Planning Process and Mortality Mapping

Questions/Exercises	Activities	Time	Instructional Aids
What is a work plan?	Review of case questions Brainstorm about what a work plan is and present overheads	8:30-9:00	Flip Chart and Paper Overheads
Why do we plan?	Brainstorm about why we plan and present overheads	9:00-9:15	Flip Chart and Paper Overheads
What is the planning process?	Brainstorm about what the planning process is and present overheads	9:15-9:45	Flip Chart and Paper Overheads
How do we evaluate our plans?	Brainstorm about how plans are evaluation and present overheads	9:45-10:00	Flip Chart and Paper Overheads
BREAK		10:00-10:15	
Group Exercise	Mortality Mapping Presentations	10:15-11:30	Worksheets Flip Chart and Paper
Group Exercise	Gap Analysis Presentations	11:30-1:00	Worksheets Flip Chart and Paper

What is a Work Plan?

A work plan functions like a blueprint: it shows all of the smaller steps involved in achieving a larger goal. A work plan guides us through a series of activities, and serves as a check against our overambitious tendencies. Effective managers regard work plans as tools rather than as final documents, and are willing to make adjustments to their work plans whenever necessary.

RULE NUMBER 1: ***Good work plans are flexible!!***

Why do we Plan?

We plan because material, financial and human resources are scarce in most developing countries. A carefully drafted work plan is the best way to guarantee that limited resources are used in a productive way.

A work plan can be prepared to show how a predetermined amount of funds will be used, or to demonstrate a need for a specified amount of funds.

RULE NUMBER 2: ***A work plan is the only logical way to organize the activities the funds are expected to support.***

What is the Planning Process?

Work plans can and should be developed on a number of different levels and at different intervals. Work plans can be developed at the central level, provincial, regional or district level, service site or community level, or by the individual. By the same token, work plans can be developed every five years, annually, quarterly, monthly or daily.

RULE NUMBER 3: ***The level and interval at which the work plan is drafted depends on your needs and time frame.***

The work plan process or cycle can be reduced to five basic questions:

---------- 1. **Where are we now? (assess health status, define problem)**

Strategic Planning

---------- 2. **Where do we want to go? (create vision, identify goals)**

---------- 3. **How will we get there? (select strategies, establish objectives)**

Operational Planning

---------- 4. **What will we do to get there? (select activities, project outputs, assign people and resources, schedule time)**

5. **How will we know when we arrive? (monitor objectives and outputs, program support)**

Strategic Planning:

Strategic Planning **is the process of determining what an organization intends to be in the future and how it will get there. It is finding the best future for your organization and the best path(s) to reach that destination. A *Strategic Plan* identifies the general course (Question #3) the organization will take to progress from the current situation (Question #1) to the desired situation (Question #2). *Strategic Plans* usually extend over several years, focussing on medium to long range goals and objectives.**

Operational Planning:

Operational Planning **is the process of programming yearly activities to show, in specific terms, how, in the coming year, an organization will move toward the future described in its strategic plan. *Operational Plans* translate the strategic plan's general strategies and strategic objectives into a series of specific activities (Question #4) that will best implement the strategies, over the short term.**

Case Guide

Part III: Budgeting and Financial Administration

Purpose:

The fourth planning question "What will we do to get there?" is addressed in this portion of the case study. Getting where we want to go involves identifying four key factors: Who, Where, What and How. In planning terms these translate into management of resources.

Financial management skills and budgeting techniques allow managers to increase the amount of value they get for their money and other resources.

This portion of the case study begins with an overview of financial management, accounting and control systems, and introduces key concepts, such as inflation adjustments and recurrent costs. The participants are then asked to perform a historical financial analysis public health expenditures in the study District, and calculate specific indicators.

Duration: 1 full day

Session Questions:

Upon completing Part III of the case study, participants should be able to answer the following questions:

1. How can financial data be collected and organized to construct an accurate statement of historical costs?

2. How does one calculate a percentage cost profile and average unit costs, given financial and activity data?

3. How does one interpret and draw conclusions from financial statements and financial performance indicators?

4. How does one develop an activity-based budget?

Trainer's Notes

Part III: Budgeting and Financial Administration

Questions/Exercises	Activities	Time	Instructional Aids
How can financial data be collected and organized to construct an accurate statement of historical costs?	Review of case questions Brief discussion of Budgeting and Financial Terms Group work on Worksheet 1 - Summary	8:30-11:00	Flip Chart and Paper Overheads Worksheets
	Discussion of Questions from Worksheet 1	11:00-12:00	
How does one calculate a percentage cost profile and average unit costs, given financial and activity data?	Group work on Worksheets 2&3 BREAK (included w/group work)	12:00-1:00	Flip Chart and Paper Worksheets
How does one interpret and draw conclusions from financial statements and financial performance indicators?	Group work on Worksheet 4	2:00-3:30	Flip Chart and Paper Worksheets
How does one develop an activity-based budget?	Discussion of Questions from Worksheets 2,3&4	3:30-5:00	Flip Chart and Paper Worksheets

What is a Budget?

A budget is a plan with a price tag.

Why do we Budget?

/ Accountability

/ Decision-Making

Was the money used in the most effective *(achieving desired results)* ***and efficient*** *(achieving desired results using least amount of resources/most results with given resources)* ***way possible?***

Kinds Of Budgets

$ Line Item Budget

$ Program Budget

$ Recurrent Budget

$ Capital Budget

$Cash Budget

Key Concepts:

Expenditure versus Expense:

Cash disbursed signifies an expenditure; resources consumed signifies an expense.

Drugs purchased is an expenditure and drugs consumed are an expense.

Who versus What for:

Who=accountability **What for= decision-making**

Ideally, the persons with budget management responsibility should also be responsible for services and activities for which funds are used.

Inflation:

Inflation diminishes the power of money.

Year 1: $100.00 buys $100.00 worth of food
Year 2: $110.00 buys $100.00 worth of food
= 10% inflation

80/20 Rule:

A small number of "big ticket" items usually account for the most costs.

Managers should focus on the 20% of the budget items that account for 80% of the total costs.

Financial Notes:

Notes should always accompany a budget or cost analysis.

Capital versus Recurrent Costs:

Capital costs are resource inputs that last more than one year, or have a certain minimum cost.

Equipment, buildings, vehicles

Incremental Costs:

Also called "differential" or "marginal" costs - those resources which need to be considered when looking at a different situation.

Want to increase volume of clients ! Increase staff.

Case Guide

Part IV: Exploring Alternative Financing Mechanisms for Cost Recovery

Purpose:

The purpose of this portion of the case study is to introduce the participants to alternative models of financing the cost of delivering health care services. Whether it be through third party payers, fees absorbed directly by the consumers, or shared costs, the participants will learn about a variety of models that can reduce the burden of the public sector to finance the bulk of the cost of health care.
Part IV will employ a vignette to allow the participants to return to *Doubledrift* and contemplate a real life situation concerning the purchase of capital equipment using donor funds....*beware of fine print!!*

Duration: 1 full day
(Note: this case guide describes the afternoon portion of the session; the morning session should be devoted to an explanation and demonstration of CORE).

Session Questions:

By the end of this session, participants should be able to answer the following questions:

1. What activities need to be undertaken in planning for the introduction of a cost-recovery program?

2. How can one generate funds for health services?

3. How does one use explicit criteria to analyze and evaluate financing alternatives?

Trainer's Notes

Part IV: Exploring Alternative Financing Mechanisms for Cost Recovery

Questions/Exercises	Activities	Time	Instructional Aids
What activities need to be undertaken in planning for the introduction of a cost-sharing program?	Review of case questions Overview of CORE tool Demonstration of Core tool	8:30-1:00	Core Manual LCD panel
How can one generate funds for health services?	Brainstorm about generating funds for health services Part I of Case Study	2:00-3:30	Flip Chart and Paper Overheads Worksheets
How does one use explicit criteria to analyze and evaluate financing alternatives?	Brainstorm about meaning and selection of criteria Part II of Case Study BREAK (included w/group work)	3:30-5:00	Flip Chart and Paper Overheads Worksheets

Case Guide

Part V: Supporting and Monitoring the Implementation of the Plan

Purpose:

Finally, the question "How will we know when we have arrived?" is addressed. The most rewarding thing about developing any kind of plan is being able to review progress at a certain point in time to measure how much has been achieved against established objectives and programmed activities.

Without a clear understanding of the linkage between program objectives, data collection, and information utilization, managers are likely to approach the support and monitoring of the operational plan as a separate science or set of skills, which resides outside their daily management activities. Instead, both support and monitoring should serve as a link between planning and reality, and an integral part of their management activities. It is therefore useful for the manager to have an uncomplicated conceptual understanding of their application to health program management.

This portion of the case study introduces the participants to both the theoretical and practical aspects of plan support and monitoring. While support refers to helping the management teams at different levels of the system to implement their plans by acknowledging and addressing their management weaknesses, monitoring refers to reviewing, on a continuous basis, the degree to which programmed activities are completed, and established objectives are fulfilled.

Duration: 1 full day

Session Questions:

By the end of this session, participants should be able to answer the following questions:

1. How does the support and monitoring model work?

2. How can one apply the concepts of the model to the selection of instruments and methods for supporting and monitoring the plan?

3. Where can one include these methods and instruments in the development of their operational plan?

Trainer's Notes

Part V: Supporting and Monitoring the Implementation of the Plan

Questions/Exercises	Activities	Time	Instructional Aids
How does the support and monitoring and model work?	Review of case questions Presentation of the model	8:30-9:30	Flip Chart and Paper Overheads (session I) Worksheets
How can one apply the concepts of the model to the selection of instruments and methods for providing support?	Presentation of Personnel Development Assessment Brainstorm about activities to support each area	9:30-10:30	Flip Chart and Paper Overheads
BREAK		10:30-10:45	
Where can one include these methods and instruments in the development of their operational plan?	Each team is given a problem vignette and is asked to prepare a support plan for the situation involved Group presentations	10:45-1:00	Flip Chart and Paper Overheads Vignettes
How can one apply the concepts of the model to the selection of instruments and methods for monitoring activities?	Presentation of Plan Implementation Monitoring Worksheet Brainstorm about activities to monitor the implementation of a plan	2:00-3:00	Flip Chart and Paper Overheads Worksheets
Where can one include these methods and instruments in the development of their operational plan?	Each group develops a plan for monitoring activities in their District Group presentations	3::00-5:00	Flip Chart and Paper Overheads Worksheets